THE ANTECEDENTS OF SOCIAL MEDIA ADOPTION: A STUDY ON THE ROLE OF MEDIA NEEDS AND INNOVATION CHARACTERISTICS

IZZAL ASNIRA ZOLKEPLI

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Name of Candidate	:	*Izzal Asnira Zolkepli (NRIC: 771031-07-5642)*
Registration/Matric No	:	*CHA080007*
Name of Degree	:	*Doctor of Philosophy*
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ABSTRACT

In recent years, the popularity of social media has captured considerable attention, especially concerning medium usage and adoption. This phenomenon is seen as a great opportunity for expanding the marketing mix strategy. For this reason, sufficient knowledge of consumer insight is needed to understand the needs and motivations that drive a consumer to adopt social media. Hence, this research is designed to empirically investigate social media needs in relation to social media innovation. Accordingly, the Theory of Reasoned Action, Tri-Component Attitude Model, Theory of Diffusion of Innovation and Theory of Media Uses and Gratifications are reviewed and extended to explain the state of the needs and motivations of consumers together with innovation characteristics in order to identify the antecedents of social media adoption.

This research applies a two-phase multi-method strategy; in phase one, the qualitative approach is utilised using six sessions of Focus Group Discussions (FGD) and in phase two, the quantitative approach is utilised using Online Survey Questionnaires. The qualitative research used 48 respondents while for quantitative research, 428 responses were received. In analysing these data, Factor Analysis is employed to discover potential problematic items and to provide a preliminary indication of unidimensionality, discriminant validity and convergent validity. With these results, the Partial Least Squares (PLS) technique is applied to further test the validity of the overall model and the relationships between the variables hypothesized in the model. In testing the mediating effect of social media innovation characteristics, a two-stage process is employed. The structural model is first evaluated without the mediating variables, which is then followed by an evaluation of the structural relationships with mediating variables. From the analysis, it is found that the structural relationship supports the direct effect and indirect effect of the mediator and confirms five out of the seven hypothesised relationships.

Overall, the results for the PLS structural model provide statistical evidence that supports the relationship between media needs, innovation characteristics and adoption. The mediating effect of the innovation characteristic that is presumed to enhance the speed of adoption is also supported. Therefore, the findings suggest a set of media needs that consist of personal needs, social needs and tension release needs, which can be used to target and segment the social media users. In addition, the findings suggest that the innovation characteristics of social media do enhance the speed of adoption, which is a good indicator to prove that social media innovativeness plays an important role in the popularity of the social media. The research makes a significant contribution to the theory and academic understanding of the adoption in the area of technology media, specifically in Malaysia, which can be used to guide the marketer to design a better marketing strategy via the social media as a medium of contact and connection.

ABSTRAK

Kebelakangan ini, populariti media sosial telah menarik perhatian ramai terutamanya terhadap peningkatan penggunaan media sosial. Fenomena peningkatan ini telah dilihat sebagai satu peluang yang besar bagi pemasar memperkembangkan strategi pemasaran campuran mereka. Pengetahuan yang secukupnya tentang gelagat pengguna adalah perlu bagi memahami keperluan dan motivasi yang mendorong pengguna untuk menggunakan media sosial. Hasil kajian ini adalah bertujuan untuk menyiasat secara empirik keperluan yang diwujudkan pengguna terhadap media sosial yang dihubungkan bersama ciri-ciri inovasi media sosial itu sendiri bagi mengenalpasti anteseden penggunaan media sosial. Sewajarnya, bagi merealisasikan kajian ini, *Theory of Reasoned Action, Tri-Component Attitude Model, Theory of Diffusion of Innovation* dan *Theory of Media Uses and Gratifications* telah dikaji semula dan diperluaskan untuk mengenalpasti tahap motivasi pengguna bersama ciri-ciri inovasi media sosial bagi menerangkan model penggunaan media sosial.

Kajian ini meliputi dua fasa dengan menggunakan Strategi Kaedah-Pelbagai (Multi-Method Strategy) iaitu pertamanya melalui pendekatan kualitatif yang menggunakan 6 sesi Perbincangan Kumpulan Fokus (FGD) dan keduanya ialah melalui pendekatan kuantitatif yang menggunakan 428 Soal Selidik Atas Talian. Bagi menganalisa data ini, *Factor Analysis* telah digunakan untuk mengenal pasti potensi pembolehubah yang bermasalah dan juga bagi menyediakan petunjuk awal *unidimensionality*, *discriminant validity* dan *convergent validity*. Hasil dari keputusan ini, teknik *Partial Least Squares* (PLS) diaplikasikan untuk terus menguji kesahihan keseluruhan model dan hubungan antara hipotesis pembolehubah yang wujud pada model yang dicadangkan. Untuk menguji kesan pengantara bagi pembolehubah ciri-ciri inovasi media sosial, proses dua peringkat telah digunakan. Pada peringkat pertama, analisa telah dijalankan keatas model struktur tanpa pembolehubah pengantara diikuti dengan penilaian terhadap hubungan struktur dengan pengantara pembolehubah. Hasil analisa ini, mendapati bahawa hubungan struktur menunjukkan sokongan terhadap kesan langsung dan kesan tidak langsung antara pengantara di mana lima daripada tujuh hubungan hipotesis telah disahkan signifikan.

Secara keseluruhannya, hasil model struktur PLS telah memberikan bukti statistik yang menyokong hubungan antara keperluan media, ciri-ciri inovasi dan penggunaan media sosial. Kesan pengantara ciri-ciri inovasi yang dianggap penting bagi meningkatkan tahap penggunaan media sosial juga telah disokong oleh analisa struktur. Hasil penemuan kajian telah mencadangkan satu set keperluan media sosial yang terdiri daripada keperluan peribadi, keperluan sosial dan keperluan menghilangkan tekanan yang boleh digunakan untuk memsasar dan mensegmen pengguna media sosial. Penemuan kajian juga menunjukkan bahawa ciri-ciri inovasi media sosial mampu meningkatkan tahap penerimaan media sosial di mana ia juga merupakan petunjuk yang baik bagi membuktikan bahawa inovasi media sosial memainkan peranan penting dalam populariti media sosial. Kajian ini memberikan sumbangan penting pada teori dan pemahaman akademik dalam mengangkat bidang teknologi media khususnya di Malaysia yang boleh digunakan untuk membimbing pemasar membentuk strategi pemasaran yang lebih baik melalui media sosial sebagai medium perhubungan dan pengantara.

DEDICATION

To Sittee Ismail with much Love, Respect & Admiration

To Baby, Gegirl, Wiwi, Mimi, Momo, Bobo, Tommy
for indescribable and borderless Love & Friendship

In Loving Memory of Gina, Andrew, Lola, Dundee, Skye, Shamok

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Izzal Asnira Zolkepli, April 2014

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LIST OF ABBREVIATIONS

ADOPT	Social Media Adoption
AVE	Average Variance Extracted
BLG	Belongingness
BRT	Behavioural Reasoning Theory
BTS	Bartlett's Test of Sphericity
C2B	Consumer to Marketer
C2C	Consumer to Consumer
CB-SEM	Covariance-Based Structural Equation Model
CFA	Confirmatory Factor Analysis
CGI	Common Gateway Interface
COM	Compatibility
COX	Complexity
CR	Composite Reliability
CRM	Customer Relationship Management
CSHIP	Companionship
CV	Cross-Validation
DIT	Diffusion Theory of Innovation
DV	Dependent Variable
EFA	Exploratory Factor Analysis
ENJ	Enjoyment
ENT	Entertainment
ESC	Escapism
FGD	Focus Group Discussion
GoF	Goodness-of-Fit
INNO	Innovation Characteristics
INT	Interactivity
IT	Information Technology
IV	Independent Variables
KMO	Kaiser-Myer-Olkin's Sample of Adequacy
MGB	Model of Goal-Directed Behaviour
MI	Media Involvement
MSD	Media System Dependency
OBS	Observability
PCA	Principal Components Analysis
PERSONAL	Personal Release Needs
PEU	Perceived Ease of Use
PLS	Partial Least Squares
PLY	Playfulness
PU	Perceived Usefulness
RA	Relative Advantage
RSS	Really Simple Syndication
SEM	Structural Equation Modelling
SIF	Social Influence
SIN	Social Interaction
SOCIAL	Social Needs
TAM	Theory of Technology Acceptance Model
TENSION	Tension Release Needs
TCAM	Tri-Component Attitude Model
TPB	Theory of Planned Behaviour

TRA	Theory of Reasoned Action
TRL	Trialability
TRN	Trendiness
UGC	User-Generated Content
UGT	Media Theory of Uses and Gratifications
UTAUT	Unified Theory of The Acceptance and Use of Technology
VIF	Variance Inflating Factor

LIST OF PUBLICATIONS

Journal Articles

Zolkepli, I.A. and Kamarulzaman, Y. (2011), *Understanding Social Media Adoption: The Role of Perceived Media Needs and Technology Characteristics*, World Journal of Social Sciences, Vol.1 (1), Pp. 188 - 199

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Chapter One
INTRODUCTION

1.1 Introduction to Research Area

This chapter introduces the fundamental elements that form this research by highlighting the unresolved key issues based on the literature that motivated the conduct of this research. It begins with an introduction of the research scope, which is based on the three bodies of knowledge: (i) social media, (ii) consumer and (ii) technology. The background of this study is linked to the research problems and gaps in the current knowledge. It also presents an overview of the research methodology and rationale of the research that explains the overall purpose of the study including the specific research questions, objectives, findings and the conclusions.

As the title explains, the focal point of this research is on social media. The widespread global adoption of social media has had tremendous influence on the social interaction between individuals, the community and at the societal level. Based on the recent statistics released by Internet World Stats in 2011, the number of global Internet users amounted to 2,095,006,005 worldwide (Internet World Stats, 2011a). Of these, 82% are older than 15 years old and they are the social media users (Socialbakers, 2011). They are estimated to spend close to one in every five minutes on social media sites, which places social media as the most engaging online social site worldwide (Radwanick, 2011). Astoundingly, since its inception, social media has taken only a few years to gain the time and attention of Internet users, and, hence, has led to an increase in the adoption of social media.

From the presented statistical numbers, it shows that Internet users have been impacted by the social media, thus significantly changing the way they consume online media, which highlights the convergence of the online and offline world. Regardless of geography, this convergence merges the complex structure of the digital experience the consumer receives, which also opens new opportunities for marketers (Radwanick, 2011).

Of all the social media sites, Facebook has become the premier site that has experienced impressive growth over the last few years. In January 2010, this site was noted to have 350 million active users across the globe. By 2011, the number of active users had risen to 640 million of which half of the users log in every day. Within only twelve months, Facebook had seen a 40% increase in daily usage. Table 1.1 shows the recent statistical results published at the end of 2011 by rank of social media users and the adoption rate worldwide (Qualman, 2011). Facebook users are estimated to reach a total of one billion users in the near future, with a 75% adoption rate noted as at year 2011.

Table 1.1: Social Media Users and Adoption Rate Worldwide

	Social Media Site	Registered Users	Adoption Rate
1	Facebook	750,000,000	75%
2	QZone	481,000,000	48%
3	Twitter	200,000,000	20%
4	RenRen	170,000,000	17%
5	Vkontakte	135,000,000	14%
6	MySpace	125,000,000	13%
7	Badoo	122,000,000	12%
8	Orkut	120,000,000	12%
9	Bebo	117,000,000	12%
10	LinkedIn	100,000,000	10%

(Source: Qualman, 2011)

Similarly, in Malaysia, in 2011 the total Internet users were numbered at 16,903,000, which represents 58.8% of the Malaysian population (Internet World Stats, 2011b). Out of this number, there are about 12,269,900 Facebook users that make up 72.6% of the total Malaysian Internet population. The high adoption rate of Facebook has placed Malaysia 17th in the World Facebook ranking based on country per user ratio (Socialbakers, 2011).

By having said that, the statistical results depict an Internet innovation phenomenon that suggests consumers' response towards social media indirectly changes their media consumption trend and media adoption patterns (Mangold & Faulds, 2009). It also indicates that social media adoption develops an enormous force causing social media to be among the popular sources of Internet media (Rashtchy, Kessler, Bieber, Shindler, & Tzeng, 2007). Factually, social media, which was built as a medium for interaction, allows Internet users to create, generate and exchange media content between them (Cooke & Buckley, 2008; Kaplan & Haenlein, 2010), and initiates these users to voluntarily join, participate and communicate with other users (Bernoff & Li, 2008; Kaplan & Haenlein, 2010). Having to highlight the statistical results and these responses, it unfolds that the ease of use and usefulness of social media is presumed to capture so much attention from the Internet users, thereby encouraging the immense adoption of social media. This is a growing trend that is happening both globally and locally. The consistent development and growth in the adoption of social media enables the user to gain power over their information selection, thereby affecting their behaviour and attitude by the new ways that social media innovation has brought to their life.

Thus, this research is set out to fill the gaps in the current understanding of the social media phenomena, which illustrate the needs and motivation that drive adoption behaviour and how such behaviour is influenced by social media innovation.

1.2 Research Background

1.2.1 Social Media Effects on the Consumer and Marketer

In recent years, the popularity of the social media has captured considerable attention, especially over the usage and adoption of the medium (see Figure 2.7). Social media depicts an advanced relationship between the consumer to consumer (C2C) and consumer to marketer (C2B), which has resulted in a fragmented market that has led to the need for modification of the overall marketing strategy (Bhagat, Klein & Sharma, 2009; Mangold & Faulds, 2009; Schau, Muniz & Arnould, 2009).

This has also resulted in the market shrinking and becoming more concentrated than before (Drury, 2008). Social media, currently being among the most usable mediums of communication, is seen to cultivate the consumer and marketer relationship to a greater extent because it encourages instantaneous and simultaneous communication, hence enabling marketing messages to travel fast (Bhagat et al., 2009; Mangold & Faulds, 2009; Schau et al., 2009). Among the social media that have seen huge social interaction and received aggressive adoption are Facebook and Twitter (Qualman, 2011), which has caused marketers to progressively turn to the social media platform to extend and expand their marketing mix strategy (Dholakia, Bagozzi & Pearo, 2004; Hennig-Thurau, Gwinner, Walsh & Gremler, 2004; Jepsen, 2006). To date, in many advertising campaigns, it is not unusual to see the icon of ‘Like us on Facebook’ or

'Follow us on Twitter', which is used to encourage social conversation on the Facebook page and Twitter post to spread social marketing messages.

In addition, due to the overwhelming social marketing messages passing around social media, marketers have to share the role of influencer with social media users because social media advocates uncontrolled and uncensored content. (Bernoff & Li, 2008; Kietzmann, Kristopher, McCarthy & Bruno, 2011). In fact, this role is enhanced through the co-creation of Web content and content sharing from both marketers and consumers (Bhagat et al., 2009; Hanna, Rohm & Crittenden, 2011)..

As a result of the above-mentioned issues affecting the consumer and the marketer, it is suggested that ***sufficient knowledge concerning how consumers behave and form attitude towards social media is important to understand in order to help marketers formulate an effective segmenting, targeting and positioning strategy, which, to date, the empirical findings pertaining to this are limited. Thereby, this research takes into account the needs and motivations that lead consumers to adopt and use social media.***

1.2.2 Consumer and Media Needs

In explaining consumer and media needs, it has been observed from earlier research that consumers use the media for personal reasons to satisfy their needs and gratifications (Dholakia et al., 2004). Based on this, the media is conventionally seen as a two-pronged tool that (i) enables the consumer to experience the medium while at the same time (ii) requires gratification from the usage and media benefits (Katz, Blumler & Gurevitch, 1974; Hair, Bush & Ortinau, 2003).

The late twentieth-century saw a host of theoretical frameworks emerging with little attention given concerning how to relate or build research models upon existing media and consumer theories. More often than not, the consumer and media theoretical frameworks are linked with older and established social sciences theory (Atwater, 2009). It is noted that most discussions on the needs and motivations consumers develop towards the media revolve around media uses and gratifications (Lin, 1996; Diddi & La Rose, 2006; Luo, Chea & Chen, 2010).

Having said this, one prominent theory of media that can be used to explain consumer media needs and motivation is the Media Theory of Uses and Gratifications (hereafter is referred to as UGT), which identifies the state of needs that consumers seek and get when using the media. It is noted that consumers are free to choose the media that meets their own needs and action. This theory emphasizes that different consumers use the same or different media for various purposes according to their affective and cognitive responses towards the media (Katz et al., 1973; Blumler, 1979). Also, a large amount of literature has suggested that UGT provides several ways of classifying media needs, in which some consumers use the media for immediate and deferred gratification, informational-educational, fantasist-escapist entertainment and also as a means to connect or disconnect from reality (Charney & Greenberg, 2002; Kaye, 2004; Ko, Cho & Roberts, 2005; Diddi & La Rose, 2006).

As the social media continues to provide consumers with a wide range of interaction platforms and user-generated content, UGT is deemed appropriate to justify the fundamental needs, psychological motives and psychological gratifications that consumers develop prior to adopting social media (Cheung, Chiu & Lee, 2010; Luo et al., 2010). This theory is also predicted to explain the factor that motivates consumers to

choose social media based on needs and motives, thus enlightening marketers on how to devise their marketing strategy based on these categories via the social media.

Hence, the current prediction suggests that an extension of the media theory in the area of social media studies is needed to demonstrate theoretical compatibility with other social science disciplines, which, in this research, is between the consumer and innovation-based media.

1.2.3 Consumer and Innovation

Driven by media needs that lead to media adoption, the innovation characteristics that come with the medium also serve as an important influence over the adoption decision. Being an innovation-based media, social media has emerged to be one of the most influential innovative media in the twenty-first century (Lee & Ma, 2012).

The Diffusion Theory of Innovation (hereafter referred to as DIT) describes that before a set of behaviours reaches the state of adoption, the user firstly develops the need for the innovation. By yearning for this need, it enhances the speed of adoption (Rogers, 2003). As social media users are active and use social media for information and personal satisfaction, the innovation characteristic is indeed another important driver that is predicted together with consumer needs over media to increase the popularity of social media.

In recent years, the majority of innovation studies that employ DIT focused on the adoption of Internet technologies, for instance, mobile gaming (Kleijnen, De Ruyter & Wetzels, 2004), mobile Internet service (Pedersen, 2005), mobile phones (Roach, 2009)

and e-public relations (Kitchen & Panopoulos, 2010). It has been confirmed that innovation plays a significant role in the adoption of these technologies. Previous research that studied social media has so far less emphasized on technology innovation, which is actually an added value to the social media itself (Cheung et al., 2010; Shin & Shin, 2010; Fischer & Reuber, 2011).

Therefore, the current prediction suggests that in order to understand the overall concept of social media adoption, consumer needs and motivations should be further correlated with social media innovation, so that a holistic social media adoption framework can be built.

1.3 Research Problems

In trying to understand the drivers of social media adoption, previous studies were found to mostly extend the predictors of Internet adoption into investigating other types of Internet innovation. These adoption issues have been approached from three perspectives, namely, from technology acceptance, where attitude towards the use of technology by the consumer or company was examined (Davis, 1989; Mathieson, 1991; Venkatesh, 2000; Parasuraman & Colby, 2001; Ratchford, Lee, & Talukdar, 2003; Chung & Austria, 2010; Kamarulzaman, 2011; Yousafzai & Yani-De-Soriano, 2012); on virtual communities, where consumer behaviour was analysed as a means to predict online attitude (Bagozzi & Dholakia, 2002; Dholakia et al., 2004); and on online media usage, where consumer tendency to use and adopt media were examined to understand the functions of the media to the consumer (Chung & Austria, 2010; Hutton & Fosdick, 2011; Lee & Ma, 2012).

Based on the above, research that looks into the factors that motivate the social media adoption are rather limited (Boyd & Ellison, 2007; Mangold & Faulds, 2009; Quan-Haase & Young, 2010). In fact, similar studies that investigate online media behaviour were done independently focusing on a single type of social networking, for instance, chatrooms (Mayzlin, 2006), forums (Bickart & Schindler, 2001; Pitta & Fowler, 2005), blogs (Hsu & Lin, 2008), YouTube (Haridakis & Hanson, 2009), Facebook (Quan-Haase & Young, 2010; Smock, Ellison, Lampe & Wohn, 2011) and Twitter (Fischer & Reuber, 2011; Hughes, Rowe, Batey & Lee, 2012). Frameworks that explain the adoption of social media as a whole, and that also cover most aspects of social media, are limited.

Also, in finding answers to the high adoption rate of social media, the need to analyse (i) consumer motivations to use social media and (ii) social media innovation characteristics are predictably important. Based on the previous studies, the actual needs and motivations that drive consumers to use social media are as yet unclear. In addition, it remains questionable whether consumer media needs that lean towards the social media are the same as compared to other types of media, for instance, newspapers, radio, magazines, television or the Internet itself, because social media has the advantage of being a medium that is noted as having a high interaction effect and consumer controlled effect (Bhagat et al., 2009). This poses management problems and raises questions in terms of the academic understanding on consumer social media needs in comparison to other media needs, which is deemed crucial when it comes to the strategizing of the marketing campaign and concept (Hanna et al., 2011; Kietzmann et al., 2011; Zolkepli & Kamarulzaman, 2011). Hence, this research is designed to focus on ***'what drives consumers to adopt social media?'***

1.4 Research Purpose

The overall purpose of this study is to provide a better understanding of consumer behaviour in adopting social media through an integrated perspective of media needs and technological innovation. The issues highlighted raise several questions that need answers through empirical investigation. As explained, the rate of social media adoption is increasing, thus social media usage is expanding. However, it remains questionable whether or not the consumer media needs of the social media will have the same significant impact as other media has towards the consumer.

Assuming that their motivation to use the social media is a very important consideration for future knowledge and social media marketing strategy, consumer motivation leading to social media adoption is of utmost importance both academically and practically. To justify consumer inclination towards this phenomenon, this research attempts to address these issues by empirically investigating the drivers of media needs and the role played by technology innovation, which are both presumed to hasten the adoption process.

To accomplish this study, this research attempts to answer the general research question of ***'what explains consumer adoption of social media'.*** To be able to study this question in greater detail, more specific questions are developed. The formulation of three specific research questions are as below:

i. RQ1 - What are the drivers that contribute to consumer adoption of social media?
ii. RQ2 - What is the relationship between media needs and social media innovation characteristics?

iii. RQ3 - Does social media technology innovation mediate the relationship between media needs and social media adoption?

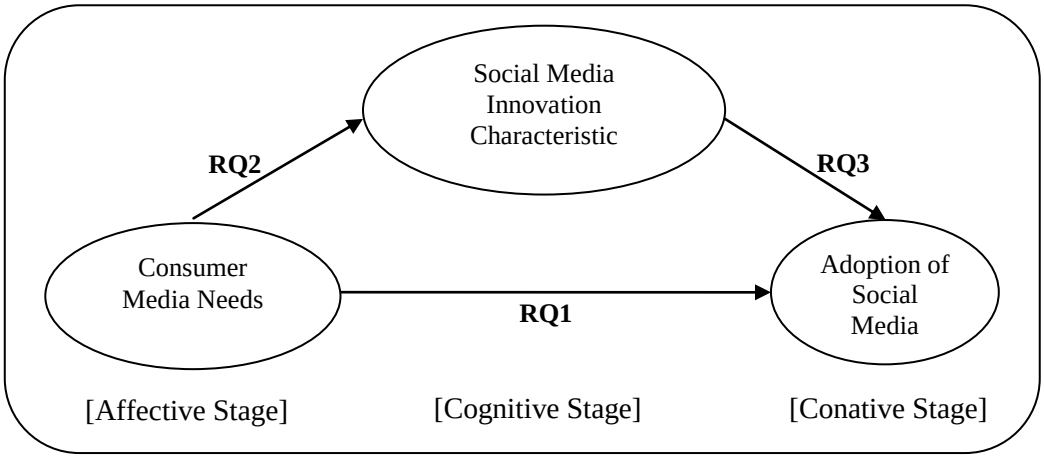


Figure 1.1: Brief Conceptualisation of the Research Framework

These research questions are illustrated in the diagram presented in Figure 1.1, outlining the relationships under investigation. The arrow labelled RQ1 represents the first research question, which ***aims to identify the drivers that contribute to consumer adoption of social media***. The second research question is represented by arrow RQ2, which ***aims to identify the relationship between media needs and innovation characteristics of social media,*** and, finally, research question three is depicted by arrow RQ3, which ***intends to determine the mediating effect of innovation characteristics***, which is presumed to be incorporated in social media naturally, and is predicted to have a significant impact on consumer adoption behaviour. A more detailed explanation of this conceptualisation is presented in Chapters 3 and 4.

1.5 Research Rationale

i. Do Consumer Media Needs Differ From Other Media?

First and foremost, it should be highlighted that a change in the media usage pattern is occurring, which has prompted many studies to reveal that the traditional model of media communication as no longer adequate to understand media adoption (Charney & Greenberg, 2002; Quan-Haase & Young, 2010). To understand social media adoption, extending previous media models with social media will give a more accurate picture of the factors that lead to the rapid rate of media adoption. This is because, at some point, traditional media and Internet media do share similarities (Preece, 2001; Mersey, Malthouse & Calder, 2010; Xiang & Gretzel, 2010).

However, to replicate other media models with the Internet media is discouraged because the nature of each type of media is different (Lin, 1999; Kaye, 2004; Stafford, Stafford & Schkade, 2004). Social media, for instance is asserted to give a certain level of enjoyment because the media experience provided by this medium is entertaining and interactive (Rashtchy et al., 2007). The media experience that the consumer gains from using the media changes their behaviour and their attitude towards the medium. (Dholakia et al., 2004; Valenzuela, Park & Kee, 2009; Shin & Shin, 2011). ***Certainly, to answer to this, in actuality consumer media needs are different from other media. Thus, this research fills the knowledge gap by developing social media needs that contribute to a new media model for social media.***

ii. What is the Purpose of Adopting the Media?

Secondly, consumer media usage is noted to be purposive in nature and involves active behavioural control in which consumers seek media content because of their internal

motivations (Eastin & Daugherty, 2005). These internal motivations are to meet consumer specific needs and serve as the basis of attitude formation (Allport, 1967; O'Keefe, 2002; Daugherty, Eastin & Bright, 2008;). Previous literature on consumer and media studies noted that the psychological needs that consumers gain through media are strong predictors of media adoption (Katz et al., 1973; Parker & Plank, 2000; Xiang & Gretzel, 2010). For instance, earlier studies show that consumers' perceived helpfulness of the media works as an essential driver in media adoption, as studied by Katz et al. (1974), Blumler (1979) and Mersey et al. (2010).

Similarly, technological innovation incorporated in the media also works as an advantage to support consumer perceived usefulness of the media. In this research context, social media nature, which comes with ease of use, helps consumers to keep connected, communicate and keep information close to them, which is available any time they need, defines social media perceived usefulness to them (Rogers, 2003; Schau et al., 2009; Xiang & Gretzel, 2010). ***Certainly, to answer to this, the purpose of adopting the social media is twofold because social media is perceived as helpful in terms of fulfilling the psychological needs of the consumer and usefulness in terms of providing innovation in the media that enables the consumer to gain advantage from the technology. Thus, this research fills the knowledge gap by proposing the consumer and social media adoption model, which covers the consumer's state of media needs and technology innovation that is expected to mediate the speed of social media adoption.***

iii. What Are the Motivations that Lead to Media Adoption?

Thirdly, considering the above-mentioned requirements of media needs and technology innovation, extending the theory paradigm based on consumer behavioural responses

towards social media adoption is presumed to explain the consumer affective, cognitive and conative stage of the adoption decision (Agarwal, Sinha & Tanniru, 1996; Järvi & Reijonen, 2003). This is supported by previous studies that indicate entertainment, pastime, escape, social interaction, information, convenience and coolness as highly related to innovation-based media (Charney & Greenberg, 2002; Diddi & La Rose, 2006; Papacharissi & Rubin, 2000). These indicators are presumed to expand the motivation prediction of media needs in the social media context. ***Thus, in considering the psychological aspects and usability nature of this medium, this research fills the knowledge gap by proposing a new set of media needs predictors that help to create social media need segmentation.***

Based on the background and rationale presented above, the main research objective is designed ***to explain consumer adoption of social media***, which contributes to a better understanding of consumer predictive needs and the relation to consumer adoption behaviour of social media. In line with the above, the specific research objectives are articulated as follows:

i. RO1 - To identify the drivers and dimensions of consumer media needs that drive social media adoption
ii. RO2 - To distinguish the motivation that drives the affective and cognitive component of attitude formation in social media adoption
iii. RO3 - To identify the type of media needs and innovation characteristics that dominantly drives consumer adoption of social media
iv. RO4 - To suggest a suitable marketing strategy that determines the ways of segmenting, targeting and positioning consumers in social media based on affective, cognitive and conative response

1.6 Research Methodology

In an effort to address the research objectives and answer to the research questions, a mixed-strategy method using triangulation was applied. Triangulation involves using more than one method, as it is believed that both methods are important in understanding the research (Bryman & Bell, 2007). In the triangulation, qualitative (focus group discussions) and quantitative (online survey) data collection were mixed together to generate information, insight and ideas that cover the broad understanding of the actual behaviour of social media users. Qualitative research was used to confirm the proposed conceptual framework and its measurement items. Then, the hypothesised relationship and the items were tested using quantitative research (David & Sutton, 2004; Bryman & Bell, 2007). Since the scope of research covers a new context (i.e. social media), ***applying the mixed-strategy was aimed to strengthen the connection of each construct and identify new measurement items.***

Probability sampling was employed using the stratified sampling method followed by simple random sampling. Malaysian Internet users were stratified accordingly using online user profiling released by the Department of Statistics Malaysia and Nielsen Malaysia in 2010. Then, through this stratum, the link to the online survey was randomly posted, shared and tweeted based on top ranked social media sites – Facebook, Twitter and LinkedIn. The survey link was connected with, shared on/or posted in groups, fan page, brand page and random individual page that have high members/subscribers/followers. ***Using a web-based questionnaire as the instrument, a total of 428 replies were received in a period of two months, from September to October 2011.***

Content analysis was used to analyse the transcript of the focus group discussions according to the designated theme, and the Partial Least Squares (PLS) technique was used for the structural model analysis and testing of the hypotheses. The PLS technique was employed because this research is an exploratory study (Sánchez, 2009; Hair, Sarstedt, Ringle, & Mena, 2011; Hair, Hult, Ringle, & Sarstedt, 2013), for which few past researchers have found the relationship in the area of the consumer and social media. In addition, this research area is relatively new, some measures and relationships have not been previously tested enough or have been tested in other media contexts but not in the social media context. ***To ensure that the relationship between the established indicators and the respective latent variables are met (Henseler & Chin, 2010), which is critical for validating the exploratory model, the PLS technique is deemed suitable.***

1.7 Research Significance

As of today, the field of Internet communication media has developed a broad body of research, and, in general, this field of research has emerged as one of the important research disciplines. Research in this field explores the issues and uses of social media as a mass medium that analyses the effects of human interaction and behaviour with technology mediated communication.

The current consumer trend towards adopting social media reflects the demand being placed in this research. As explained, this research is developed based on three main factors: (i) media, (ii) consumer, and (iii) technology innovation. Besides understanding this research model based on these three factors, it is inappropriate for future research to replicate this research in their media study context because each media has its own criteria and replicating it will deviate the understanding of media usage.

In addition, the model established from this research may serve as an understanding of various gratifications consumers obtain from social media, based on the needs requirement because technological innovativeness embedded in social media creates a totally new media experience to the consumer. ***Hence, future research can consider performing comparative studies between different types of media that fall under the innovation-based media category.***

Notwithstanding the above, future research is also recommended ***to further expand this research specifically in the area of mobile Internet, mobile social media or mobile apps.*** Social media is not only accessed through the computer but also through Android-based devices, Blackberries, iPhones, iPads and Tablets. The ease of use and usefulness factors that enable connection through these mediums has prompted even faster social media adoption, which is not covered in this research.

In addition, despite understanding the motivation to use these mediums, more empirical research is needed to explain social media phenomena and their consequences to society. This includes applications of existing theories, which also have to be ***further modified to suit the new media environment and technology-savvy society, for instance, culture and personality factor.***

1.8 Research Contributions

The following are the main contributions of this research in respect of theory, methodology and practice.

i. Contributions to Theory

Firstly, through the results of this research, a new understanding of consumer uses and gratification of social media is established. Thus, it furnishes further knowledge concerning the predictors of media needs for social media. Through these predictors, a new set of factors that lead to the speed of social media adoption is developed, hence contributing to a new understanding of UGT.

Secondly, by identifying the sequence of connections between the predictors and the outcomes, a social media means-end chain can be created. A social media means-end chain is important because it studies the consumer involvement with the medium. It identifies the media needs sequence at different levels of social media adoption and predicts consumer involvement with the medium. Through the understanding of consumer involvement, a set of social media means-end chains based on consumer satisfaction when interacting and using social media and its functional consequences are recognized. A basic advantage of the means-end chain model for social media is that it provides a deeper comprehension of consumer motivation to use social media that highlights social media attributes and benefits.

Thirdly, it also contributes to social media segmenting, targeting and positioning. The task in segmenting, targeting and positioning the social media market is to analyse the consumer and needs relationship. This entails the analysis of affective and cognitive behaviour and environmental matters that lead to social media adoption. Extending a variation of the tri-component attitude model into the social media context contributes to creating a new social media psychographic segment. Indirectly, it contributes to the designing of a market strategy and tactics. In understanding the social media strategy

and tactics, the social media psychographic segment can be altered according to the behaviour that is exposed when using social media.

Finally, this research is able to verify the mediating role of technology innovation in the relationship between consumer media needs and media adoption (full mediation effect) and the relationship between media needs and social media (partial mediation effect). This knowledge lends an important hand in the study and advancement of theories related to the relationship between these two strong predictors and the outcome. In addition, it will be helpful to understand the mediating effect of technology innovation as being equally important in contributing to the speed of social media adoption.

ii. Contributions to Methodology

For the methodological contribution, ***this research is able to develop and validate the constructs for measuring consumer motivation to use social media.*** Validation of the constructs shows the suitability of the instrument in this area of research and can also be used in similar environments, such as mobile phone research and research of android applications. Thus, the established construct will advance studies in innovation-based media research.

The application of triangulation – mixed method strategy – where qualitative data are used to support the results obtained from the quantitative data analysis support the contribution to research methodology in the social sciences discipline. It focuses on a two-stage sequential mixed method study that delivers qualitative results from focus group discussions and online survey research for statistical quantitative results. Thus,

the application of triangulation – mixed method strategy – contributes to further comprehending the methodological development aspect in social sciences research.

Finally, the PLS method of analysis that is used for this research has not been widely employed in the area of consumer and media studies. Therefore, ***the application of the PLS technique in this research provides guidelines for its application in the social media context or other context that is similar to this research.***

iii. Contributions to Practice

This research offers some useful and practical guidelines for marketers to predict the future behaviour of social media users, especially in the area of technology adoption. Thus, by understanding this research a marketer can ***create a media strategy that maximizes the accidental exposure of their brand, and, at the same time, facilitate intentional exposure of the brand by making sure the appropriate marketing information is available in the social media.***

Also, in designing a marketing strategy, this research serves as a basic understanding of consumer involvement with the medium. As noted, the rate of social media adoption is high, which results in the importance marketers place on these sites i.e. social media sites. In digging for a deeper understanding of the consumer in this research, a marketer can diagnose the situational influence of social media, and through this the market can be segmented and targeted. ***With this understanding, the marketing mix can be placed accordingly, based on the consumer cognitive and affective state.***

Furthermore, one of the strengths of social media is that it helps the marketer to build a close connection with the consumer, in that the consumer can interact with the brand as

frequently as they like. Therefore, the consumer media needs ***serve as a basic understanding concerning how the marketer can start connecting with the consumer based on perceived needs.*** This is important because, if the marketing approach used to connect with the consumer is done properly, the marketer will keep their brand image strong in the mind of the consumer and strengthen brand equity in the long run.

Also, the adoption of new technology and the Internet has enabled Social Customer Relationship Management (SCRM) practices to flourish. ***Via the understanding of this model, communication can be directed towards potential customers and customization at the individual level, for instance, through Facebook, YouTube and Twitter.*** This helps the marketer to target, segment and profile their customer accordingly, thus helping them to connect with the customer.

1.9 Organisation of The Thesis

The thesis is organised into seven chapters. The first four chapters address the background of the study concerning consumers and social media, and the development of the theoretical framework. The remaining chapters present the empirical research, covering the aspects of methodology, results, discussion and conclusion. Figure 1.2 illustrates the structure of the thesis followed by a brief summary of the chapters.

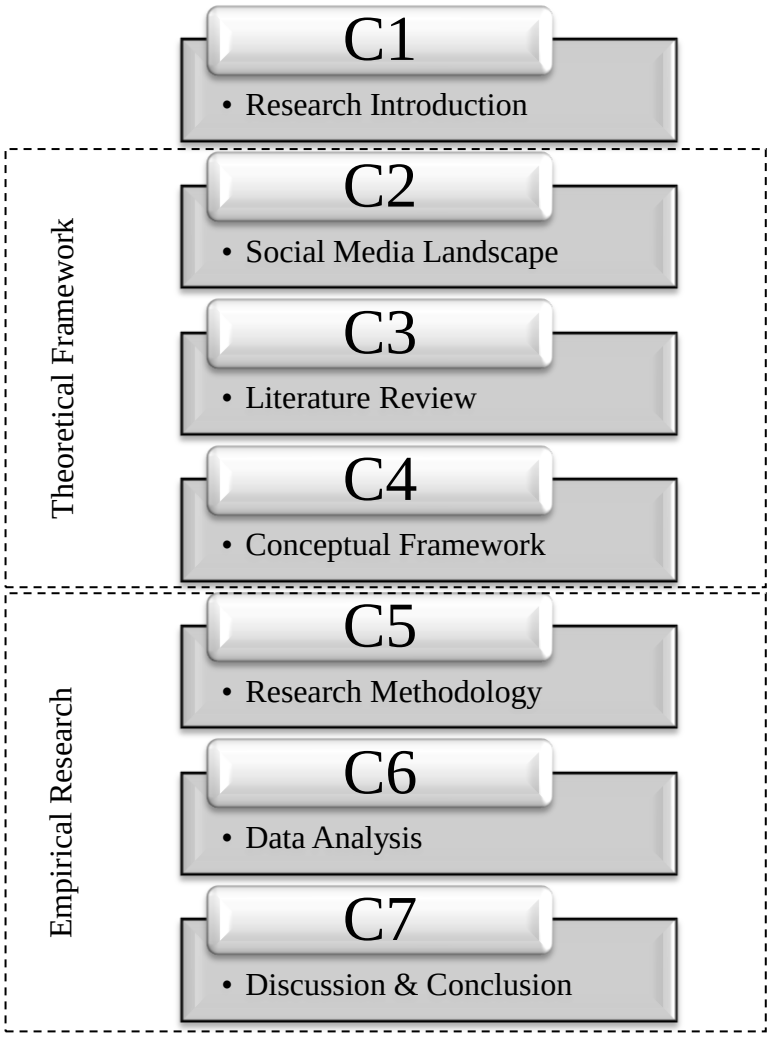


Figure 1.2: Thesis Structure

Chapter One presents the introduction to this thesis. It provides the background and the scope of the research conducted, as well as the contribution of the research to academia and the practitioners. This chapter also introduces the research rationale, research questions, research objectives, and the theoretical underpinning of the research. Lastly, the chapter provides an outline of each chapter in this study.

Chapter Two provides an overview of the Internet and social media landscape. This chapter is introduced in order to understand the nature of social media in greater detail.

It describes the evolution of social media, reviews the literature in respect of the history of the Internet and the innovativeness of social media.

Chapter Three documents a critical review of the previous research relating to the research domain, which is divided into four main parts – consumer attitude and motivation, media needs drivers, technology drivers and the combination of drivers that make up the theoretical model. These four parts define the consumer and media relationship, review the general theories linking the consumer psychological needs and motives of using the media, review the importance of these needs and motivations to help increase the media adoption rate, and highlight the research gaps in this area of discussion. Empirical evidence is also presented in support of the theory. Its objective is to provide a basis for selecting relevant constructs and to select an appropriate theory to build a model.

Chapter Four presents a more detailed conceptualisation of the conceptual research framework. The postulated relationships between variables are shown and justified by prior work in the literature. The list of the hypotheses tested and operationalisation of the construct definitions are also presented.

Chapter Five describes and justifies the methodology that is adopted to answer the research questions, which includes exploratory research, the focus group discussions and a detailed description of the quantitative data collection techniques that form the main part of the research. The chapter begins by discussing the philosophy and epistemology of the research. Then, the justification for using mixed method (triangulation) and the selection of the appropriate sampling method is explained. In addition, data analysis techniques using content analysis for qualitative research and

PLS for testing the hypotheses and model fit are described. Key methodological issues in respect of the use of the data set are also discussed.

Chapter Six presents the data analysis of the research. The chapter presents the results from the qualitative and quantitative method conducted during the data collection. It outlines the respondents' profiles and tests for similarities and differences in responses. The results of the analysis performed using the Partial Least Squares (PLS) are presented, including the relevant tests for the data.

Chapter Seven discusses the findings of the analysis from both stages of the research – quantitative and qualitative. Details of the findings obtained from the data analysis are outlined and their implications for the practical and theoretical aspects are presented. The chapter revisits the research questions, hypotheses and objectives, and links them to the research findings by giving answers to the questions posed earlier in the research. It then points out the limitations encountered in the course of doing the research. The chapter also presents suggestions for future research on this subject of study, and provides the concluding remarks on the research. Last, but not least, the chapter closes with a presentation of the recommendations to the various stakeholders in the area of consumer behaviour.

1.10 Chapter Summary

It can be concluded that although the consumer and social media area of research has evolved into a scholarly field, research on social media will continue to grow and become more dominant within the consumer and media field of research. As the innovation-based media environment converges further, the lines between broadcasting, print and online are slowly disappearing. The research concerning the effects of social media should serve as one of the priorities in understanding future online consumer behaviour.

This first chapter has presented an overview of the research. The background and rationale of the research, the research objectives, the research problems and questions that are addressed. Then the research contents are outlined. The chapter aims to provide the readers with a holistic picture before elaborating upon the research theme in the subsequent chapters.

A deeper discussion regarding the social media landscape, consumer attitude formation and motivation towards adopting media and technology innovation including the theoretical background relating to consumer adoption behaviour will take place in the following chapter.

Chapter Two
SOCIAL MEDIA LANDSCAPE

2.1 Introduction

This chapter provides an overview of the context of this research, that is, social media. It explores from a broader picture of Web 2.0, which led to the emergence of social media, where emphasis is given to social media definition, classification, function and benefits. Subsequently, it highlights Facebook to exemplify the adoption rate. The innovative characteristics of social media, being a medium that is built through the technology platform, are important to explore at this stage because they influence social media usage, in general, and, at the same time, add value to the consumer.

2.2 The Revolution of Web 2.0

The turn of the century brought a significant improvement in technology enhancement. The inception of the Internet and World Wide Web has been proven to be a great invention to the society and businesses, in particular, and the world, in general. Its characteristics of convenience, informative, resourceful and entertainment have had considerable impact on life today. Historically, the Internet was developed as part of the electronic computers in the 1970s. Through the Internet, the Web was introduced as an information medium, which through Web applications, the computer user reads, writes and obtains information (Sun, Rubin & Haridakis, 2008; Kamarulzaman, 2011).

Commonly, the term ‘Web’ or World Wide Web (www) is often used as a synonym for the Internet, however in actual fact the Web is actually an Internet service that operates using the Internet technology and within the Internet technology itself. The Internet and the Web are two separate but related entities. The Internet is a massive network of networks. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. Since then, Internet technology has become the platform for many innovations consecutively, which have led to its adoption and adaption by individuals and businesses. The Web is an incredibly powerful communications tool, which helps marketers to effectively undertake traditional marketing strategy (Ko et al., 2005; Miletsky, 2010; Kamarulzaman, 2011). ***For these reasons, the Web has become more popular than non-Web functions and attracts millions of users to surf the Internet regularly.***

Consequently, through the Web, people start to connect with other people, and participate in content design and message sharing, where, in actuality, this element represents the characteristics of Web 2.0 (Reigner, 2007). The term Web 2.0 refers to the changes seen in the Internet technology from being a one-way communication into two-way communication. It takes control of the positive and negative influence over consumer opinion and consumer behaviour. The revolution of the early Web (i.e. Web 1.0) to Web 2.0 changed the way people keep themselves informed. The key characteristic of Web 2.0 is that it facilitates user-generated content, which is also known as UGC (Cooke & Buckley, 2008; Eccleston & Griseri, 2008; Efthymios & Fountain, 2008).

According to Constantinides and Fountain (2008), the term Web 2.0 was first used in 2004 to describe the new way in which software developers and end-users utilize the Internet as a platform, which enables content and applications to be created and published by individuals and modified by all users in a participatory and collaborative manner. The content of the original Web pages was replaced by blogs, social networks, content communities, forums, bulletin boards, wikis, content aggregators and collaborative projects.

In addition, Kaplan and Haenlein (2010) further explain that Web 2.0 represents the ideological and technological foundation of UGC, the advantages of which allow Internet users to make full use of the social media. UGC is described as various forms of media content that are publicly available and created by end-users. What makes Web 2.0 adoptable is its three basic requirements:

i. Content is published either on a publicly accessible website or on a social networking site that is accessible to a selected group of people
ii. Content shows a certain amount of creative effort
iii. Content is created outside of any professional routines and practices.

The use of the term Web 2.0 exhibits enhancement of the Web application. The development from Web 1.0 to Web 2.0 facilitates the evolution of the Internet's social networking, which makes it inclusive and more responsive than many other electronic channels. Web 1.0 connected people to the computer networks whereas Web 2.0 utilises technology and applications (Strauss & Frost, 2012). Web 2.0 specifies the division of Internet usage between social (expressive) and non-social (instrumental) (Petric, 2006).

According to Petric (2006), expressive use of the Internet refers to the practice and performance of technologically mediated sociality, which is used to perform and understand social interactions, self-presentation, public performance, social capital management, social monitoring, maintenance and furthering social ties. The expressive use of the Internet is best recognised as technology-mediated social ecology that involves other people, values, norms and social contexts. In contrast, instrumental use of the Internet refers to information seeking, knowledge gathering and commercial transactions.

The revolution of Web 2.0 creates new families of online applications that share a number of common sets of objectives, characteristics and design principles. The main innovative aspect of Web 2.0 applications is that it allows Internet user participation in the form of content contribution and content editing. Based on the above, the term Web 2.0 is defined as:

> *A collection of open-source, interactive and user-controlled online applications expanding the experiences, knowledge and market power of the users as participants in business and social processes. Its applications support the creation of informal users' networks facilitating the flow of ideas and knowledge by allowing the efficient generation, dissemination, sharing and editing/refining of informational content (Constantinides & Fountain, 2008, p.232)*

Despite the vastness of Web 2.0 and its rapid growth, there are some areas of this immensity that marketers must consider. An important aspect of Web 2.0 is that it mediates customer empowerment and encourages a visible shift in consumer attitude. An example of consumer change in attitude is that the consumer creates new needs, develops new value perceptions and modifies the information search tactic and buying behaviour. The shift in consumer needs reflects the growing demand for online services through which consumers are able to interact with marketers, while, at the same time,

also access peer communities for more truthful advice and reviews (Hagel & Armstrong, 1997; Constantinides & Fountain, 2008; Eccleston & Griseri, 2008).

The value attributed to this phenomenon cannot be based solely on the consumer value[1] approach. It should be accessed also from the personal gratifications as the consequences of usage. ***Based on this, it is presumed that the change in attitude and values towards the revolution of Web 2.0 also leads to the change of consumer overall needs towards adopting social media, in which the ideology of Web 2.0 represents the entire evolution of social media. In order to address these issues, the subsequent section will provide an explanation of what constitutes social media.***

2.3 Social Media

According to Boyd and Ellison (2007), the first social media site was established in 1997 with the name of SixDegrees.com. SixDegrees.com allowed the user to create profiles and connect with friends by providing a tool to connect and send messages to a friend by first signing in as a member of SixDegrees.com. It attracted millions of users, but failed to sustain and closed in 2000. The closure was due to the fact that there was little activity to be done after connecting with friends. Nonetheless, the introduction of SixDegrees.com led the Internet users to start paying attention to online social networking.

Based on Internet user acceptance of online social networking, a number of community tools began to mushroom with additional features attached to the site, to name a few,

[1] Consumer value explains the consumer's valuation of product consumption or possession. For example, consumers buy products for transactional value and also for the product's benefits that satisfy their needs or personal values (Lai, 1995).

AsianAvenue, BlackPlanet and MiGente. These sites were created to allow the online social networking user to generate personal, professional and dating profiles.

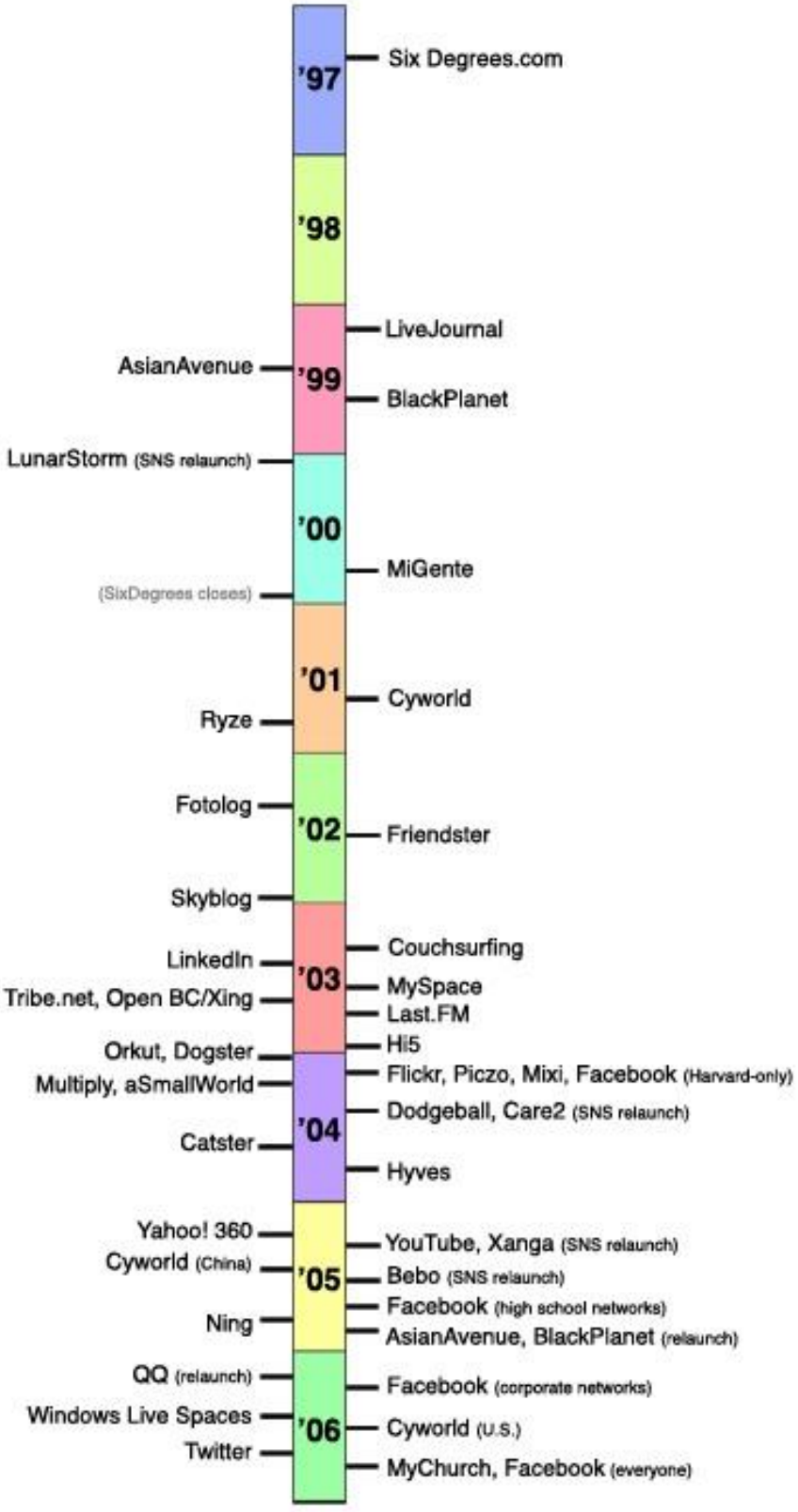
In 2002, the launch of Friendster marked another milestone in the development of social media. Friendster was designed to compete with Match.com, a profitable online dating site and to help friends-of-friends meet, which were based on the assumption that friends-of-friends would make better friends than strangers. However, Friendster faces a decreasing number of users due to technical difficulties, social collisions and a rupture of trust between users and the site.

Starting from the introduction of Friendster in year 2002, many social media sites were launched. As the social media and UGC phenomena grew, websites focusing on media sharing began featuring on the Internet. One of the most influential launches of the social media was MySpace. MySpace began operation in 2003 to compete with Friendster. MySpace differentiated itself from other social media types by adding features on its site based on user demand. Among the features that made MySpace more attractive than Friendster was that it allowed users to personalize their pages and favourites (Ellison, Steinfield & Lampe, 2007; Raacke & Bonds-Raacke, 2008).

It is noted that ever since social media emerged, it has managed to attract the majority of consumers of the United States as well as proliferating and growing in popularity worldwide. At the same time, social media features started to collaborate with other types of social media; for instance, the RSS tool was used to sync social media features together, for instance, blogs with social networking sites and video sharing sites to attract a broader range of Internet users (Boyd & Ellison, 2007).

However, in 2004, there was another significant shift that gave a lift to the Internet user acceptance of social media. The introduction of Facebook began to receive attention, not only from its place of origin, but throughout the world. Initially, Facebook was created by a student from Harvard University for limited access by all Harvard University students, which was only used for student socialising. However, due to the overwhelming student acceptance, it then expanded to high school students, professionals, corporate networks, and, eventually, everyone. Unlike previous social media, Facebook's key feature enables it to make private user profiles for public viewing. Also, another notable feature that differentiates Facebook from other social media is the 'applications' or 'apps' that it introduces, allowing users to personalise profiles, share interests and perform their social networking tasks. Hence, the unique features of Facebook have had a strong impact on the speed of social media adoption (Boyd & Ellison, 2007; Ellison et al., 2007; Zeynep, 2008; Valenzuela et al., 2009; Cheung et al., 2010; Quan-Haase & Young, 2010; Smock et al., 2011). The details in Figure 2.1 show the milestones of social media.

In conclusion, the emergence of social media indicates a shift in Internet user engagement and involvement with technology and online communities. Social media sites prosper largely because they are organised around the people and their interests. The introduction of social media has established a new relationship between humans and technology. Therefore, it demands attention for further research.



(Source: Boyd & Ellison, 2007)

Figure 2.1: Timeline of the Launch Dates of Major Social Media

2.3.1 Definition of Social Media

Having presented an overview of social media, it would be prudent to return to the very important task of defining the nature of social media. From the perspective of the individual, social media works as a mechanism for interaction and socialisation, however, from the business perspective social media works as a medium by which companies communicate with customers as a whole (Boyd & Ellison, 2007; Mangold & Faulds, 2009; Hutton & Fosdick, 2011).

In actuality, social media is presumed differently be it by the Internet user or by companies. Social media does not replace the telephone, television, radio, magazines, email communications or even transactions. Instead the social media complements these and augments the entire value of communication and interaction (Chan-Olmsted, Cho & Lee, 2010; Chung & Austria, 2010).

Social media is defined by Marketo (2010) as the production, consumption and exchange of information through online social interactions and platforms. In addition, Greenberg (2010) emphasizes that the Internet users, which are the customers, are now a social customer and that every interaction they establish on the Internet is part of the collaboration between themselves and the companies. Others, such as Ploof (2009), assert that social media creates opportunities for companies to share corporate information and brand stories. The common ideas that can be found from these definitions are that the desire to heighten the experience and improve relationships with other users or customers through social media are at the core (Andzulis, Panagopoulos & Rapp, 2012).

Despite looking at the broader perspectives, which cover marketers and customer propensity towards social media, Kaplan and Haenlein (2010) describe social media in more detail by stating that social media is a group of Internet-based applications that were built on the ideological and technological foundations of Web 2.0, thus allowing the creation and exchange of UGC. In keeping with the above mentioned explanation, this research views social media in accordance with Strauss and Frost (2012, p.328) who define social media as:

> *'A term used to describe the type of media that is based on conversation and interaction between people online that takes many different forms, including Internet forums, Web logs, social blogs, microblogging, wikis, podcasts, pictures, video, rating and social bookmarking that include technologies such as blogs, pictures-sharing, Vlogs, wall-postings, email, instant messaging, music sharing, crowdsourcing and et cetera'*

There is no doubt that social media sites are increasing in number and attracting users more quickly than any other traditional media in terms of interaction. Based on the definition and the understanding of social media, it requires an appropriate strategy and framework for implementation and transformation of social media into the consumers day-to-day life as well as part of marketing strategy as it grows. ***Like any new technology, social media creates opportunities and challenges, especially in the area of marketing and consumer behaviour, which demand attention for further research.***

2.3.2 The Diffusion of Social Media Innovation

With the introduction of social media, consumers rapidly adopted social networking sites, engaged in micro-blogging, and downloaded applications for smartphones and computer tablets to enhance their social lives and promote sharing and communication with friends and family. Beyond using social media technology for updating pictures and posting status updates, consumers and members have found that social media

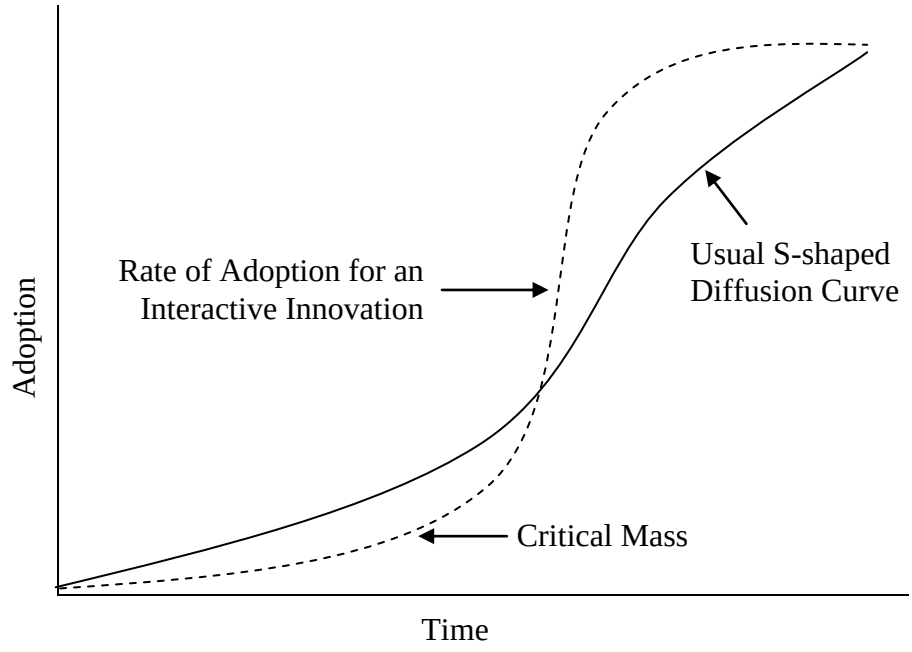
applications empower them when considering the flow of communication and conversation (Andzulis et al., 2012).

Social media like any other media, focuses on bringing information, sharing photos, videos and other content to the Internet user that wants to learn and be entertained. What makes social media different is that the content is not generated as a marketing monologue, such as print and electronic advertising and company websites, but as a conversation in which all participants have the ability to upload content and discuss, edit or rate the content of each other (Strauss & Frost, 2012).

Witnessing the power of social media applications, many marketers have embraced and utilised these tools to spread their marketing message and to get up close and personal with consumers. With the proliferation of social media, it is clear that the technology has the potential to influence business or even the industry, just as technology did in the Internet age (Andzulis et al., 2012).

The innovation of social media provides users, be it the consumer or the marketer, with a variety of communication tools. For example, Facebook allows users to broadcast messages to a large audience using status updates and wall posts, while also providing features, such as chat for messages that the user wishes to keep private. While the diversity of features available in social media allows for equally diverse forms of communication, previous research addressing the motivation for using social media considers the possibility that users attend to features for the same purposes, which means that the motivation to adopt social media is homogeneous (Smock et al., 2011).

Rogers (2003), in Diffusion of Innovation Theory (DIT), theorises that innovation is spread through society based on the S-curve graph, as depicted in Figure 2.2. The S-curve graph explains that early adopters select the technology first, which is then followed by the majority until the technology innovation is common to everyone in the society.



(Source: Rogers, 2003)

Figure 2.2: The S-Shape Curve of Adoption

The S-curve graph shows that adopter distribution increases slowly at the beginning, during which, in this stage, there are only a few adopters in each time period. The curve then accelerates to the maximum when half of the individuals in the social system adopt it, before gradually increasing at a slower rate as fewer and fewer remaining individuals adopt the innovation. The S-curve graph is innovation-specific and system-specific. It can be used to describe the diffusion of a social media among the members of a specific system (i.e. Internet users), which, in this research, is used to refer to the social media consumer (hereafter will be used interchangeably with the word consumer).

In relation to the S-shape curve of adoption, Figure 2.7 explains the growth of Facebook adoption, in which the graph line appears to be similar to the graph line of the S-shape in Figure 2.2. In comparing these two Figures, it appears that Facebook adoption has also passed the critical mass point at which enough individuals have adopted the social media, which indicates that the diffusion of social media innovation has reached a self-sustaining level (Boyd & Ellison, 2007). ***In relation to this, to date, there has been little research that studies the impact of social media innovation and its influence on the consumer, which can be used to answer the S-shape graph of social media adoption. Chapter Three will further explain this proposed relationship.***

2.3.3 Classification of Social Media

Social media is the umbrella term used for all of the web tools and applications used for socialising that utilise UGC. These tools include social networking sites, message boards, blogs, wikis, podcast, instant messaging, online forums, photo sharing, video sharing, email and more (Boyd & Ellison, 2007; Bernoff & Li, 2008; Mangold & Faulds, 2009; Fischer & Reuber, 2011; Strauss & Frost, 2012).

In order to classify social media, Kaplan and Haenlein (2010) outline the challenges and opportunities of social media that merged the Social Presence Theory and Media Richness Theory to identify social processes, and also employed the Self-Presentation and Self Disclosure Theory to classify social media, as depicted in Figure 2.3. It is noted from these findings that the higher the social presence, the larger the social influence that the consumer has on each other's behaviour.

		Social Presence/Media Richness		
		Low	Medium	High
Self-Presentation/ Self-Disclosure	High	Blogs	Social Networking Sites (e.g. Facebook)	Virtual Social Worlds (e.g. Second Life)
	Low	Collaborative Projects (e.g. Wikipedia)	Content Communities (e.g. YouTube)	Virtual Game Worlds (e.g. World of Warcraft)

(Source: Kaplan & Haenlein, 2010)

Figure 2.3: Classification of Social Media

With regards to Kaplan and Haenlein's classification of social media, Short, Williams, and Christie's (1976) study can be used to support these classifications, in that it described the media (i) acoustic, (ii) visual and (iii) physical contact to be achieved through any type of media usage that allows communications between two partners to be established. This two-way communication is influenced by the intimacy (interpersonal vs. mediated) and immediacy (asynchronous vs. synchronous) of the medium. Similarly, Daft & Lengel (1986) explain that the goal of any communication media is to reduce the ambiguity and uncertainty, and that communication media appears to be different in the degree of richness. ***Thus, some media are more effective than other media in resolving ambiguity and uncertainty.***

Moreover, the concept of self-presentation in Figure 2.3 describes consumers as having the desire to control the impressions that others form about them (Maslow, 1970; Datta, 2010). This is done with the objective of influencing others to gain rewards and create an image that is consistent with their personal identity. This is also supported by Schau

and Gilly (2003), who studied the key reason why people decide to create a personal webpage, and found that the motivation underlying this is self-presentation where the consumer wants to be seen and present in cyberspace. Thus, in respect of social media, self-presentation is done through self-disclosure, which refers to the conscious or unconscious revelation of their personal information, for instance, thought, feelings, likes and dislikes, which is consistent with the image they would like the public to witness (Kaplan & Haenlein, 2010).

Kaplan and Haenlein (2010) classify the types of social media into six quadrants. These six quadrants are defined by low, medium or high in social presence/media richness and low or high for self-presentation/self-disclosure. Out of these six classifications, this research gives priority to social networking sites. This is because this research concentrates on consumers in Malaysia, which is acknowledged to be one of the countries with the highest adoption rate of social networking sites as explained in Section 1.1.

Going back to the social media classification in Figure 2.3, social networking sites are seen to have medium social presence/media richness and high self-presentation/self-disclosure. From the statistical analysis of the Malaysian user of social media, which was presented in Chapter One, it is seen that social networking sites have had a huge impact on the overall social media adoption rate, and that Malaysia is ranked 17th in the World by the country per user ratio based on the adoption rate of Facebook (Socialbakers, 2011).

Social networking sites are Web application sites that enable consumers to connect by creating personal information profiles that allow friends and colleagues to have access

to their profiles for social interaction and conversation, a concept that is similar to the real world social network. The notion of social networking is based on the idea of 'six degrees of separation', that is, any two people are connected through contacts with not more than five contacts. It has a unique feature that allows consumers to meet friends of friends and enables consumers to articulate and make their social networks visible (Strauss & Frost, 2012). Social networking sites can be defined as:

> *Web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection and view and transverse their list of connections and those made by others within the system (Boyd & Ellison, 2007, p.211).*

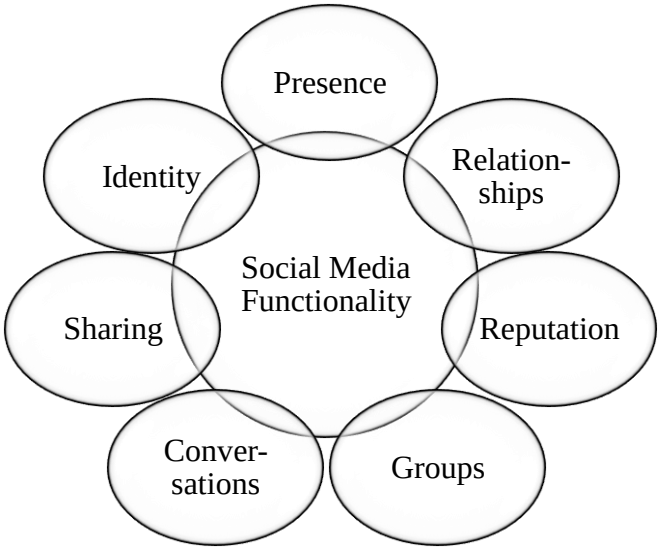
Accordingly, it can be summarised based on these classifications that the ***future of social media remains wide open. More powerful computers, advanced programming languages, and faster connection speeds have given marketers a new landscape in which they are free to explore consumer behaviour and creatively design marketing strategy through these classifications. Nevertheless, in turn, it gives rise to various predictions about how the social media landscape will look in the future. This is especially potent in a world where conversations and ideas are shared across divides that separate not only continents and countries, but also generations, socio economic classes, races, religions, and industries. Consequently, there is a need for more research on this complex relationship.***

2.3.4 Function of Social Media

With the proliferation of innovation-based media, social media promotes new forms of social interaction and collaboration. Social media enables the consumer to swap ideas, participate in activities and events as well as sharing wider interest with other social media consumers (Lee & Cho, 2011). Compared to traditional media, social media

allows its users to actively engage in a communication process as information receivers as well as message creators (Chan-Olmsted et al., 2010).

The use of social media in recent years has rapidly increased, especially among teenagers and middle-aged users. It is used for communicating with friends, establishing friendships, spending leisure time and also spending time with the computer itself. As a result, inevitably, the rapid increase in the usage of social media affects consumer behaviour, because consumption related interactions occur in these platforms (Durukan, Bozaci & Hamsioglu, 2012).



(Source: Kietzmann et al., 2011)

Figure 2.4: Function of Social Media

Figure 2.4 shows the social media function proposed by Kietzmann et al. (2011). According to Kietzmann et al., social media has seven functions – identity, conversations, sharing, presence, relationships, reputation and groups. Each of these functions allows the consumer to reveal and examine a specific facet of social media experience.

i. Identity

Identity represents the extent to which social media users reveal identities in a social media setting. This includes disclosing information, such as name, age, gender, profession and location, as well as information that portrays users in certain ways (Kietzmann et al., 2011). Kaplan and Haenlein (2010) explain that the presentation of a user's identity happens through the conscious or unconscious self-disclosure or subjective information, such as thoughts, feelings, likes and dislikes. Consequently, consumers that use social media sites have different preferences and aims. Many consumers who participate in online activities use their real names, while others are known by their nicknames.

ii. Conversation

Social media conversation represents the extent to which consumers communicate with other consumers in a social media setting. Many social media sites are designed primarily to facilitate conversations among individuals and groups. These conversations happen for all sorts of reasons. Consumers tweet, blog, and participate in conversations to meet new like-minded people, to find friends, to find love, to build self-esteem or to be on the cutting edge of new ideas or trending topics (Mangold & Faulds, 2009; Kaplan & Haenlein, 2010; Kietzmann et al., 2011).

iii. Sharing

Social media sharing is the extent to which consumers exchange, distribute, and receive content. The term sharing often implies that exchanges between consumers are crucial. Also, social media consists of people who are connected by a shared object, for instance, groupon, text, video, picture, sound, link, location, et cetera. Sharing is one of

the ways for interacting in social media, (Singh, 2005; Hsu & Lin, 2008; Nov, Naaman & Ye, 2010; Kietzmann et al., 2011; Lee & Ma, 2012).

iv. Presence

Social media presence represents the extent to which consumers can identify if other users are accessible. Presence includes knowing where others are, in the virtual world and in the real world. In the virtual social media world, this happens through status lines like ‘available’ or ‘hidden’. Given the increasing connectivity of people on the move, it bridges the real and the virtual world (Kaplan & Haenlein, 2010; Xiang & Gretzel, 2010; Kietzmann et al., 2011).

v. Relationship

The relationship represents the extent to which consumers are related to other consumers. This means that two or more users have some form of association that leads them to converse, share objects of sociality, meet up, or simply just list each other as a friend or fan. Consequently, how users of a social media platform are connected often determines the what-and-how of information exchange. In some cases, these relationships are fairly formal, regulated and structured (Kietzmann et al., 2011). From the Social Network Theory, it explains the difference in relationship traits. The structural property of a user’s relationships refers to how many connections they have and their position in their network of relationships. Research shows that the closer and larger a user’s portfolio of relationship is, the more central his or her position is in the portfolio, and the more likely the user is to be an influential member (influencer) in their network (Borgatti & Foster, 2003).

vi. Reputation

Reputation is the extent to which consumers can identify the standing of others including themselves in a social media setting. Reputation can have different meanings on social platforms. In most cases reputation is a matter of trust (Boyd & Ellison, 2007; Kietzmann et al., 2011).

vii. Groups

The social media groups are the extent to which users can form communities and sub-communities. The more social a network becomes, the bigger the group of friends, followers and contacts. The social media platform recognises communities and offers tools that allow users to manage membership. The implication of groups assumes that social media communities would enjoy a way to group its users, even when the number of likely contacts is initially low for each member (Boyd & Ellison, 2007; Kietzmann et al., 2011).

In respect of the seven functions of social media, it is clear that these functions play a significant role in determining the user acceptance of social media. Since its introduction, social media, such as YouTube, MySpace, Facebook, Cyworld, Bebo and Twitter have attracted millions of users, many of whom have integrated these sites into their daily practices. While the key social media features are fairly consistent, the culture that emerges around it is varied (Boyd & Ellison, 2007).

With the widespread use and adoption of social media, many companies have actively employed various social media applications as a marketing tool (Paine, 2009; Stelzner, 2009). ***With this movement, it shows that the marketer tries to use social media to grasp the attention of the consumer, in which they assume consumers are***

congregating in social media rather than in other media. Therefore, the underlying motive concerning what makes consumers adopt social media needs investigating.

2.3.5 Uses and Benefits of Social Media

Most social media sites were developed at the initial stage by small groups of engineers, architecture designers, feature developers, network engineers, system administrators and database administrators. Evidently, this group of people had no idea that social media sites would grow so extensively in a matter of a few years in terms of traffic, number of users and amount of data posted and viewed (Kim, Jeong & Lee, 2010).

Social media is a locus of social interaction that evolves and changes. It reflects various dynamics within social networks and communities (Zeynep, 2008). As explained earlier, the objective of social media is to enable the formation of online communities, interactions among members of such communities, and the sharing of UGC. According to Kim et al. (2010) there are eight types of social media features:

i. Personal profiles
ii. Establishing online connections
iii. Participating in online groups
iv. Communicating with online connections
v. Sharing UGC
vi. Expressing opinions
vii. Finding information
viii. Holding the users

Social media has attracted hundreds millions of consumers from all over the world. The uses and benefits of social media derive from the availability of the enormous amounts of UGC incorporated within them. Kim et al. (2010) list the specific uses and benefits of social media for the individual, company and government, as depicted in Table 2.1. Since this study examines the individual (i.e. consumer), the individual aspects are discussed in the section below.

Table 2.1: Uses and Benefits of Social Media for Individual, Company and Government

Users	*Uses*
Individual	New means of communication New source of knowledge Participating in online special interest groups New source of entertainment New venue for self-expression Online directories of people
Company	Marketing and customer relationship management Corporate intranets External peer networking Miscellaneous
Government	Governance Law enforcement Election campaigns Legal proceedings

(Source: Kim et al., 2010)

i. Social Media as New Means of Communication

Social media has become a new means for consumers to communicate with other consumers, beyond email, text messaging, and mobile phone. It offers asynchronous means of communication between them and others in the online community (Kim et al., 2010). Consumers can broadcast messages to a large number of people, view and respond at anytime to the messages posted by others. It consists of offline friends who are members of the site, new online friends or online groups that the consumers join (Randerson, 2007).

Consumers can also view at anytime the content that online friends, groups and other consumers post, and receive updates to the status and activities of their friends and groups. Although some of the contents and updates are irrelevant to some consumers, some can be helpful and interesting. It appears that many consumers have become addicted to this new mode of communication (Stone, 2009). Cohen (2009) predicts that the consumer motivation to use social media is for self-promotion where through communication they sustain their visibility with others. Therefore, social media is used as a new means of communication.

ii. Social Media as a New Source of Knowledge

Social media is about UGC. UGC has enabled social media to become a new source of collective knowledge, and, sometimes, beyond the knowledge sources that the Internet search engines can give. UGC includes photos, videos, music, blogs, comments and so forth. Social media users engage in one-on-one or one-to-many conversation with other online networks in order to seek or give answers to specific questions of importance to them (Kim et al., 2010). Therefore, social media benefits as a new source of knowledge.

iii. Online Communities Participation

In essence, social media is an online community that gives the consumer the opportunity to interact with a large number of people, keeping up with the world, receiving help and occasionally helping others (Kim et al., 2010). Clifford (2009) reports that many older people, who are dying of boredom, have found a reason to keep going from the social media site. It enables them to join existing groups or start a new group, which ever suits their liking. The existing groups include those that the sites provide and those that members start. The groups that the sites provide are based on a small number of natural attributes of the members. The groups that members start are

usually based on interest, hobby and cause. The social media users can interact with lots of people in the group that help one another to get information, advice and extend personal networks (Zezima, 2007).

iv. Social Media as a New Source of Entertainment

Another use and benefit of social media is entertainment. Entertainment is one of the motivations that consumers seek for enjoyment, recharging them and for passing their idle time, hence making social media a new place for entertainment and passing time. Many consumers have several social media accounts and visit social media sites both diligently and regularly. They spend time creating and posting contents and comments, update their personal profiles, and write status updates on the details of their daily lives for their online networks to read and respond to accordingly (Kim et al., 2010).

v. Social Media as a New Venue for Self-Expression

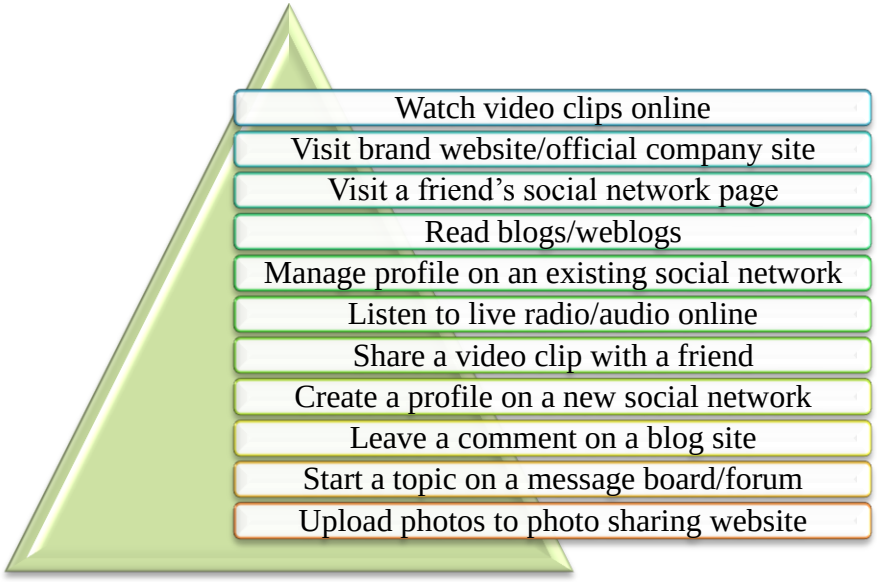
It appears that a large number of people have had a strong unexpressed desire for self-expression and desire for self-satisfaction that comes from helping others. There are three types of opportunity for self-expression online: (i) for people to post content and update status, (ii) to respond to content, updates posted by others and to participate in discussion boards, and, lastly, (iii) to reach out and help others online. Many people post personal photos and detailed updates about their daily lives and thoughts. As a result of self-expression, they obtain a sense of self-assurance and belonging. Thus, they reach out to others online, believing that those unseen people whom they have never met are good people and potential friends (Kim et al., 2010).

vi. Online Directories of People

Just as consumers turn to Internet search engines for answers to many questions, they also turn to the social media to search for anybody who resides anywhere in the world. This is a natural consequence of the fact that many sites have gathered hundreds of millions of members. Indeed the number of members of the popular sites are larger than the populations of many countries (Kim et al., 2010).

In addition to Kim et al.'s (2010) six uses and benefits of social media, Hutton and Fosdick (2011) view the uses and benefits of social media through the lens of passive to active behaviour. Passive social media activities include online reading and online viewing, which typically demand less involvement and cognitive processing than such active pursuits as writing, creating videos and posting to sites. Consumers are more likely to be involved in passive rather than in active usage, largely because such activities demand less conscious effort. Hutton and Fosdick (2011) developed a list of social media activities ascending from the most favourable to the least favourable, as listed below in Figure 2.5.

From the explanation, it is noted that social media has a high level of online and offline integration through which the consumer shows affective engagement through profiles, links with friends, associations with page, displays interest, likes and dislikes pages and joins groups. The role of social media as an entertainment source applies as much as it does to traditional forms of mass media. ***Hence, it is an interest of this research to understand the special factors of social media that make consumers adopt this medium at a faster rate. The next section provides an example of social media that has successfully changed the entire perspective of the Internet user towards social media.***



(Source: Hutton & Fosdick, 2011)

Figure 2.5: Social Media Activities in Ascending Order

2.4 The Facebook Phenomena

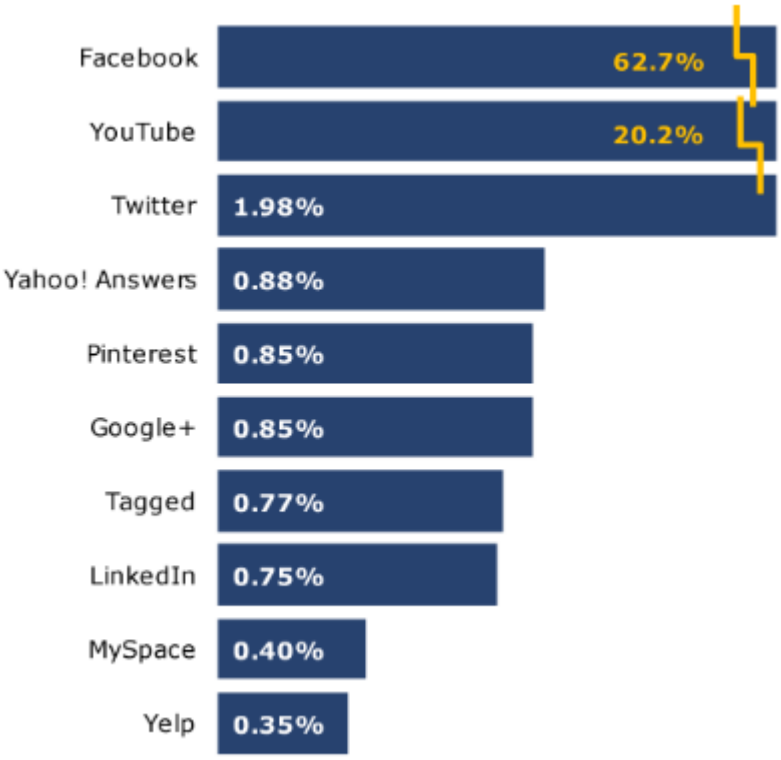
Facebook was founded in February 2004 on the premise of sharing information through a social graph, which is also known as the digital mapping of people's real-world connections. It was developed as a tool to connect the university students of Harvard University (Valenzuela et al., 2009). It then changed to become a social networking site that utilizes people's interest. It helps people communicate with friends, family and co-workers more efficiently. It has become the second most-trafficked site in the world, with over 80 million active users (Associated Press, 2012). Table 2.2 illustrates the growth of active Facebook users from 2004 to 2012.

Table 2.2: Growth of Active Facebook Active Users from 2004 – 2012

Year	*Active Users*
End of 2004	1 million
End of 2005	5.5 million
End of 2006	12 million
End of 2007	50 million
End of 2008	100 million
End of 2009	350 million
End of 2010	608 million
End of 2011	845 million
September 2012	1.01 billion

(Source: Associated Press, 2012)

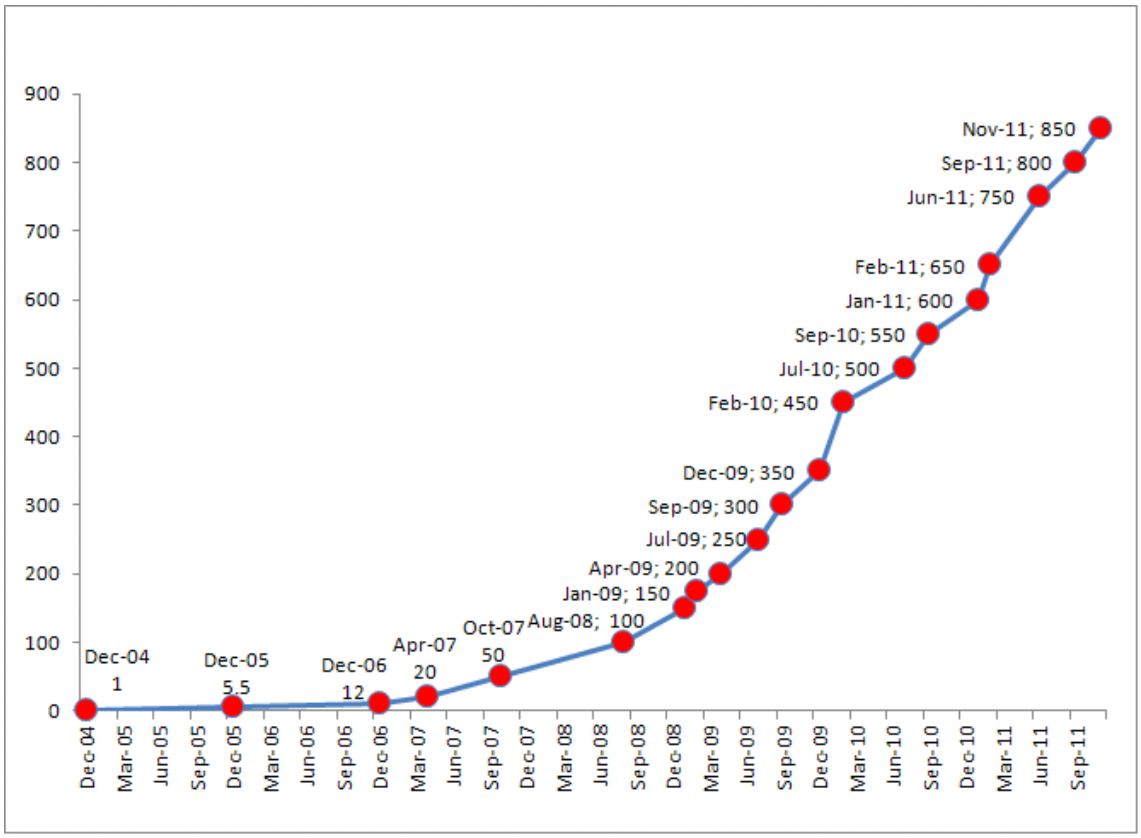
Due to the popularity of Facebook and its fast growth in terms of usage and revenue, Microsoft agreed to pay Facebook $240 million in October 2007 for 1.6 per cent of the company's share, placing the total value of Facebook at $15 billion (Stone, 2007). In 2010, Facebook shares surpassed Google to become the most popular site on the Internet for the first time (Mui & Whoriskey, 2010). In terms of the social media share of visits, Facebook had 62.7% of the market share in the United States by February 2011, which denotes a high share in the history of Internet acceptance (Experian Hitwise, 2012). Figure 2.6 depicts the top ten social networking websites by the US market share.



(Source: Experian Hitwise, 2012)

Figure 2.6: Top 10 Social Networking Sites by US Market Share of Visits (%) in June 2012

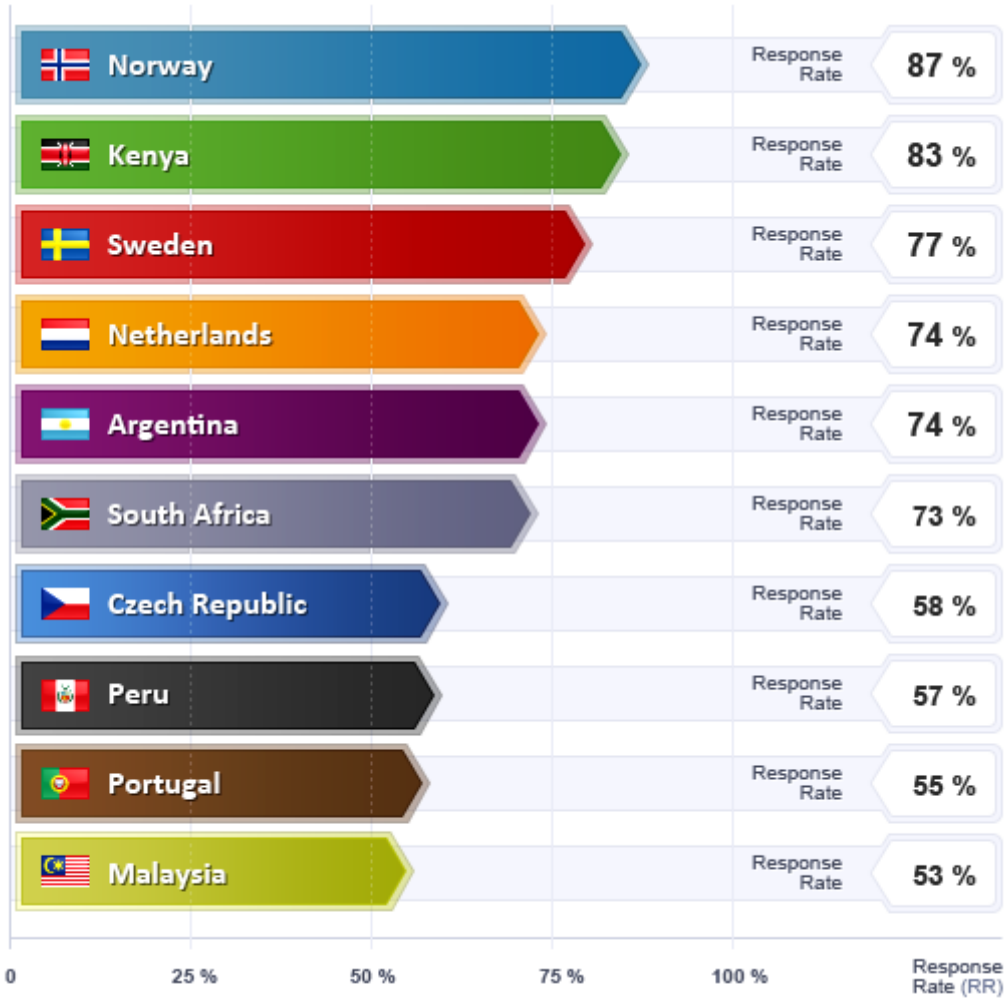
Based on Figure 2.7, it can be seen that Facebook reached the historic milestone of 500 million users by June 2012. According to Blodget (2012), as of early 2012, Facebook was worth around $75 billion. This shows the increase in Facebook users from December 2004 until 2008 as being around 100 million. However, since that point it fluctuated until the end of 2011, Facebook users were expected to reach or exceed one billion in the near future (Alisanne, 2012).



(Source: Alisanne, 2012)

Figure 2.7: Facebook Users in Millions from December 2004 until September 2011

In addition, Figure 2.8 illustrates the top ten most socially devoted countries on Facebook, in which Malaysia is ranked tenth. According to Socialbakers (2012), Facebook penetration in Malaysia is noted at 47.61% compared to the country's population of Internet users at 84.19%. The total number of Facebook users in Malaysia has reached 13,461,860, having grown from 13,046,720 in the last six months.



(Source: Janwong, 2012)

Figure 2.8: Top Ten Most Devoted Countries on Facebook

Based on these statistical elaborations, it is presumed that the social media phenomenon is not new in Malaysia. Among all the social media, Facebook has been the gem of all social networking sites due to the fact that Facebook has a simple navigation that gives users easy access to its core functions and applications. Facebook designs its social media features in a simple manner, which utilises every function and application that helps to tap on the connectivity aspects, hence strengthening the ease of use of Facebook even for the technology laggard (Baines, Fill & Page, 2010). Furthermore, Facebook recognised the importance of social connectivity and UGC, which led to the

success of its social media e-business model (Park, Kee & Valenzuela, 2009; Valenzuela et al., 2009; Smock et al., 2011).

Overall, the existence of social media gives value to the consumers. This value encourages consumers to adopt and use Facebook. In order for the marketer to succeed in social media marketing, they should establish a strategy that offers solutions to overcome social media barriers by utilising the UGC feature and social interaction. ***Therefore, this study aims to provide significant suggestions to practitioners based on the findings gathered from the behavioural aspect of consumers. This would provide a useful guide for marketers to enhance their social media marketing strategies. A detailed discussion of these suggestions will be presented in the final chapter.***

2.5 Chapter Summary

This chapter presents an overview of the study context. This has been approached by spelling out the historic development of social media from the Internet to the recent social media phenomenon that is Facebook. The principle topics that have emerged from the discussion are the importance, functions, benefits and uses of social media to the consumer, which attempt to provide a better understanding of consumer propensity towards adopting this medium that will also help to answer the descriptive analysis of this study in Chapter Six.

From this part of the review, it shows that social media is the most dynamic and fastest growing online media. It is noted that the change in attitude and values towards the revolution of Web 2.0 led to a change in the overall needs of the consumer towards the social media. This indicates the shift in user engagement and involvement with technology and online communities in that a new relationship between the consumer and technology has been established.

This part of the review also noted that little research has been conducted to look at the impact of social media innovation and its influence on consumers, which can be used to answer the S-shape graph of social media. Although this phenomenon has led marketers to move into social media marketing, not many companies have succeeded in this exercise due to the fact that they have little insight into what makes consumers adopt social media.

With regards to discussing this part of the review, ***the current study attempts to examine consumers' adoption of social media in one holistic conceptual framework***

that takes into account the element of behaviour and attitude towards media usage and technology innovation. Building upon this background, the subsequent section will provide an explanation on consumer media adoption by stressing the needs, motivation and technology innovation. The next chapter will present a literature review on consumer behavioural theory and the conceptualisation of the key constructs examined in the study.

Chapter Three
LITERATURE REVIEW

3.1 Introduction

The previous chapter introduced an overview of social media, which focused on the emergence of social media that existed through Web 2.0 via the Internet platform, and its principal characteristics. Consumer acceptance of social media and technology is a wide subject area with various behavioural aspects involved that affects the consumer adoption rate. Consumer adoption decisions towards media can be varied as there are obvious differences between offline and online media.

Accordingly, this chapter reviews the theoretical understanding of consumer behavioural aspects towards social media. It provides a comprehensive review of these phenomena and thereby evaluates the contributions of existing studies relating to media adoption. Emphasis is given to consumer behaviour and attitude formation, which lead to the establishment of need and motivation. Based on this, various underlying reasons for media adoption are explored with a focus on media needs and technology innovation. The review of the literature presents parameters based on past research findings that explain the dimensions of media needs, which are gathered from different types of media and are used to examine social media needs as well as their relation to technology innovation, which is proposed as a contributing element to the rapid speed of social media adoption.

As shown in the thesis structure mapping, this chapter is divided into four parts. The first part presents a review of the theoretical background of consumer attitude

formation, which is presumed necessary to understand how consumers change their media consumption attitude from media to media; the second part presents the theoretical background to the media needs and uses of the consumer, and the third part presents the technology innovation factor, which is presumed to drive the speed of adoption. In this chapter, Part II and Part III form the basis of the model development, which focuses on the relevant concepts and theories that are pertinent to the research constructs (i.e. Consumer Media Needs and Social Media Innovation Characteristics). The final part concludes all of these adoption drivers (or constructs) into a model and highlights the theoretical and literature gaps.

PART I: CONSUMER ATTITUDE AND MOTIVATION

3.2 Formation of Attitude, Belief and Behavioural Change

The existing theory of attitude provides guidelines to describe and understand how consumers develop attitude towards media and technology innovation. The attitude theory attempts to explain the formation of attitude, which leads to belief and behavioural response, hence, needs to be revisited in Part 1. The best way to begin is to provide a brief sketch concerning how scholars have come to understand the behavioural aspects of the consumer. This understanding is later used as a foundation to draw the research model.

i. Attitude and Belief

The study of attitude has come a long way in the discipline of social sciences, generally, and consumer behaviour, particularly. It was noted back in 1935 when Gordon Allport reported that attitude is a learned predisposition in response to an object or class of objects in a consistently favourable or unfavourable manner. At this early stage of the attitude review, Allport asserts that the conception of attitude does not result in behavioural prediction but works as two main components for a person to establish behaviour in which attitude works as (i) human predisposition towards an object whether or not the liking exists and (ii) belief. With these two components (i.e. object and belief) a set of behaviours is established (Allport, 1967).

In conjunction with Allport's report, Doob (1947) counter argues by stressing that there is more than one relationship between attitude and behaviour. According to Doob, attitude is a predisposition to response, also known as learnt mediating response (r_g).

Human attitude is developed by an appropriate predisposition towards a given object. When attitude is learned, humans also learn to respond to it. In his study, he found that there is no innate relationship between the attitude and behaviour in that the attitude needs to be learnt in order to perform a set of behavioural responses.

From these derivations, Katz (1960) concludes and describes attitude as having three components: (i) affective component, which explains about liking or feeling for an object, (ii) cognitive component, which explains about the beliefs for an object, and (iii) behavioural component, which explains about action towards the object. Hence, attitude is summarised as the evaluation of the object towards which the attitude is held. The evaluation of being favourable or unfavourable towards the object lies at the core of the attitude formation. Katz (1960), and Olson & Maio (2003) explain that while all attitude formations should include beliefs, not all beliefs are a form of attitude. Therefore, when attitudes are organised in a hierarchical structure, it should include value systems as part of the process.

In this respect, Fishbein and Ajzen (1975) add further on the study of attitude by asserting that in order for the formation and change of attitude to take place, the belief formation process also has to be examined. Belief refers to a person's subjective probability judgments concerning discriminable aspects of the individual. It deals with an individual's understanding about himself and his environment. Belief works as a subjective probability of a relation between the object of the belief and other projected values, concepts or attributes. This explanation implies that belief formation is involved in the establishment of a link between two aspects: (i) the source of information in relation to an individual's observations and (ii) the perception on any given object to have certain attributes of an individual's world. Therefore, they conclude that many

human beliefs are formed either on the basis of direct experience with the object of the belief or by some inference process.

However, Fishbein and Ajzen (1975) also refer to attitude as a person's location on a bipolar evaluative or affective dimension with respect to object, action or event that he or she encounters. It represents a person's general feeling of favourableness or unfavourableness towards the stimuli (i.e. object). In this sense, attitudes usually have values and utility for the person who holds them, and they are often tied to the person's ego or sense of identity.

From the understanding of the above-mentioned earlier study of attitude, it is noted that human attitude is stable over time. However, it exhibits changes due to the degree of stimulation received from time to time. ***Thereby, based on this, the fundamental of this research assumes that consumer attitude towards the media is stable; however, it is modified over time as new media (i.e. social media) and innovation comes in. It appears impossible to obtain a general attitude and beliefs for consumer behaviour towards media because the attitude and beliefs vary from person to person based on the number of salient beliefs the media holds. As for the present research, the understanding on human attitude, belief and behavioural changes provide the foundation on understanding the driver (i.e. the dimension) that pushes attitude change towards social media (which, in attitude study, is referred to as the object of reference). It is noted that for the consumer to adopt media it depends on the degree of stimulation the media has towards the consumer creating a favourable or unfavourable response towards it.***

ii. Behavioural Changes

It is also noted from Fishbein and Ajzen, (1975), Rosenberg and Hovland (1960), Haddock and Zanna (1999), and Olson and Maio (2003) that when studying the dimensions of attitudes, the distinctions between beliefs, feelings, attitudes and value systems should be investigated together. The intensity of attitude explains the strength of the affective component whereby the beliefs explain the strength of the cognitive component. The intensity of attitude therefore suggests two dimensions: (i) the specificity or generality of the attitude and (ii) the degree of differentiation of the beliefs. Differentiation refers to the number of beliefs of cognitive items contained in the attitude that assumes that the simpler the attitude in cognitive structure the easier it is to change.

Attempts have been made to change attitude by working primarily on the belief component or on the feeling or affective components. Rosenberg (1960) theorises that an affective change in one component of attitude will result in changes in the other component of attitude. The changes are driven by the motivation that leads to the formation of the attitude and belief.

Furthermore, Katz (1960) explains that in early mass communication studies, attitude has a different motivational basis from person-to-person. It is conjectured that human beings are rational and irrational at the same time depending on the situation and the motivation they have. Therefore, when attitude formation and change functions differ, so will the conditions and the techniques of attitude alter.

Table 3.1: Function of Attitude

Function	*Origin & Dynamics*	*Arousal Conditions*	*Change Conditions*
Adjustment	• Utility of attitudinal object in need satisfaction. Maximizing external rewards and minimizing punishments	• Activation of needs • Salience of cues associated with need satisfaction	• Need deprivation • Creation of new needs and new levels of aspiration • Shifting rewards and punishments • Emphasis on new and better paths for need satisfaction
Ego Defence	• Protecting against internal conflicts and external dangers	• Posing of threats • Appeals to hatred and repressed impulses • Rise in frustrations • Use of authoritarian suggestions	• Removal of threats • Catharsis • Development of self-insight
Value Expression	• Maintaining self-identity, enhancing favourable self-image, self-expression and self-determination	• Salience of cues associated with values • Appeals to individual to reassert self-image • Ambiguities that threaten self-concept	• Some degree of dissatisfaction with self • Greater appropriateness of new attitude for the self • Control of all environmental support to undermine old values
Knowledge	• Need for understanding for meaningful cognitive organisation, for consistency and clarity	• Reinstatement of cues associated with old problem or of old problem itself	• Ambiguity created by new information or change in environment • More meaningful information about problems

(Source: Katz, 1960)

In addition, Severin and Tankard (2010) used Katz's (1960) study to understand the functional approach of attitude that explains human motivation, which is presumed in this research as the driver that has some degree of impact on the speed of social media adoption. Katz's (1960) study identified four functions of attitude: (i) adjustment, (ii)

ego-defence, (iii) value expression, and (iv) knowledge, as explained in Table 3.1. The conclusion that can be made concerning these four functions of attitude with regards to social media is that consumer attitude towards social media depends on the excitation of need derived from the affective response and some of the relevant inputs from the environment (i.e. cognitive response). This notion is supported by Rosenberg and Hovland (1960), Haddock and Zanna (1999), and Olson and Maio (2003), who postulate the conditions conducive to attitude and explain the expression of an old attitude entrenched within the consumer or its anticipated expression that gives dissatisfaction to the consumer relating to the state of need; hence, attitude arousal or change may occur. This will be reviewed further in Part III.

In understanding attitude, belief and behavioural response, it is evident that attitude change relies on the consequences derived from belief systems and general behaviour of intentions that are used to change the attitude. Hence, this study aims to understand attitude change towards social media with considerable generalisation in the organisation of the individual's beliefs and values.

3.2.1 Theories Related to Attitude, Belief and Behavioural Response

Based on the presented study of attitude, here in this section, the subject is reviewed according to the prominent theory that is widely used by many behavioural studies to understand consumer attitude. These theories are used to analyse and draw theoretical research frameworks where they are used as a foundation to understand consumer attitude and behaviour towards social media.

In doing so, focus is given on specifying the composition of an attitude that explains or predicts the behaviour of consumers towards social media. The theories relating to the formation of attitude, belief and behavioural response are explained by the Theory of Reasoned Action (Fishbein & Ajzen, 1975), Theory of Planned Behaviour (Ajzen, 1985, 1991), Theory of Technology Acceptance Model (Davis, 1989), Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003) and Behavioural Reasoning Theory (Westaby, 2005), as below.

3.2.1.1 Theory of Reasoned Action

The Theory of Reasoned Action (TRA) was developed by Fishbein and Ajzen (1975) to provide a framework that relates behaviour with intention as an antecedent. According to Hale, Householder, and Greene (2003), the TRA derived from frustration over traditional attitude-behaviour research, which was found to have weak correlations between attitude measures and performance of volitional behaviour.

As explained in Section 3.2, attitude refers to the overall evaluation towards the performance of a particular behaviour. The TRA is known to predict behavioural intention, spanning predictions of attitude and predictions of behaviour. The separation of behavioural intention from behaviour allows for the explanation of the limiting factors on attitudinal influence. The TRA posits that the conduct of behaviour is the outcome of an individual's intention to perform the behaviour.

The foundation of the TRA framework is based on the distinction between beliefs, attitudes, intentions, and behaviours. The more favourable the individual's evaluation towards the behaviour, the more likely it is to positively influence the intention to

perform the behaviour. In turn, intention is determined by two factors: (i) individual's attitude towards the behaviour and (ii) subjective norms. The TRA highlights the subjective norms construct that explains a person's close acquaintance towards a particular behaviour. These perceptions are assumed to influence an individual's intention when performing a particular behaviour. Positive views will have a positive influence on the intention to perform the behaviour, while negative views act as a hindrance towards the intention to perform the behaviour.

To put this theory into simple terms, a person's volitional behaviour is predicted by his attitude towards the behaviour and how he thinks other people would view them if they perform the behaviour. A person's attitude is combined with subjective norms to form behavioural intention.

Sheppard, Hartwick, and Warshaw (1988) argue that the theory has made certain exceptions for certain situations. The TRA has strong predictive utility that can be used to investigate the situations and activities pertaining to behaviour formation. However, further modifications and refinements are unnecessary, especially when the TRA model is extended to the goal and choice domains.

In agreement with this, Hale et al. (2003) explain the need for certain exceptions of this theory concerning volitional behaviour. According to Hale, volitional behaviour excludes a wide range of other behaviours, such as those that are spontaneous, impulsive, habitual, the result of cravings, or simply scripted or mindless. These behaviours are not included in TRA because they are not voluntary in nature or because engaging in these behaviours might not involve conscious decision.

Due to the limitations highlighted in respect of the TRA concerning comprehending attitude and behaviour, the theory was revised and extended by Ajzen himself into the Theory of Planned Behaviour. According to Olson and Maio (2003), and Schiffman, Kanuk and Wisenblit (2010), this extension was made to further explain consumers attitude in carrying out a certain behaviour.

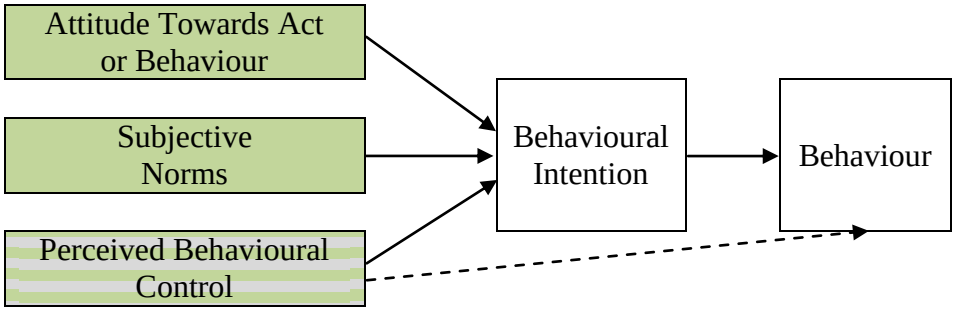
3.2.1.2 Theory of Planned Behaviour

As an extension to the TRA, Ajzen (1985) introduced the Theory of Planned Behaviour (TPB). In relation to attitude and the subjective norms of the TRA, a third antecedent called perceived behavioural control is added to the TRA model, thus extending it to become the TPB. This construct refers to a person's belief as to whether they are able to perform certain behaviours and the perceived level of effort required to execute it. The higher a person's perceived control, the stronger are the intentions to perform the behaviour. It addresses both internal control, such as person's skills and abilities, and external constraints, such as the opportunities and facilities needed to perform a behaviour.

According to the TPB, actual behaviour is a function of behavioural intention and perceived behavioural control. Actual behavioural control directly affects the execution of behaviour. Actual behavioural control reflects the ability of the individual to perform the behaviour, such as having the resources, skills and opportunity to conduct the behaviour. Without actual behavioural control, intention alone will not necessarily transpire into actual behaviour.

The limitations of the TRA and TPB are that they ignore the effects of human emotions on behaviour. They are developed based on cognitive processing and the level of behavioural change. They overlook emotional variables, such as threat, fear, mood and negative or positive feelings. Therefore, an individual's behavioural intention cannot be the exclusive determinant of behaviour where an individual's control over the behaviour is incomplete. By adding perceived behavioural control in the framework, the TPB explains the relationship between behavioural intention and actual behaviour as well as the individual's social behaviour by considering "social norms" as an important variable.

These two prominent theories of attitude, i.e. TRA and TPB, are widely used as the theoretical bases for studying consumer's adoption of IT systems and the Internet (George, 2004; Hsu & Lin, 2008; Kamarulzaman, 2011). The TRA and TPB are conceptualised in Figure 3.1, where the unstriped boxes refer to the TRA and the striped box refers to TPB.



(Source: Fishbein & Ajzen, 1975)

Figure 3.1: Theory of Reasoned Action & Theory of Planned Behaviour

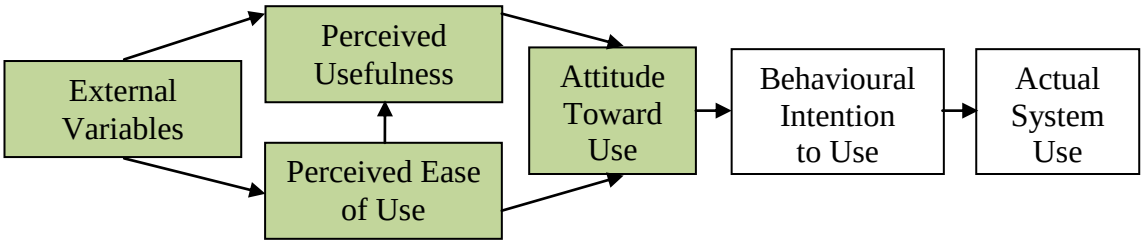
As can be noted from this sub-section discussion, the TRA and TPB are used as a theoretical foundation for this research to understand how consumers develop their set of behaviours towards social media. The shaded green boxes carry the important

dimensions that shape the development of the research model, which will be discussed in Part IV and further elaborated in Chapter Four.

3.2.1.3 The Technology Acceptance Model

One of the most widely used and referred theories in the context of technology adoption with regards to attitude and behaviour formation is the Technology Acceptance Model (TAM), which was proposed by Davis in 1989. Basically, the TAM was derived from the TRA. Fom the general theory of human behaviour and attitude (TRA), it was then narrowed down to understand human behaviour and attitude towards technology usage (TAM). It was the first theory that explained consumer attitude towards technology usage behaviour (Mathieson, 1991; Venkatesh & Davis, 2000; Hsu & Lin, 2008; Kamarulzaman, 2011) .

The TAM, as shown in Figure 3.2, posits two specific variables, namely, perceived usefulness (PU) and perceived ease of use (PEU), which determine the behaviour towards technology usage, attitude towards adopting technology and the actual usage of the technology itself. The constructs of PU and PEU are two salient beliefs that form the basis of the TAM. Davis defines PU as the degree to which a person believes that using a particular system would improve his or her job performance while PEU is defined as the degree to which a person believes that using a particular system would be free of effort. These two constructs reflect the beliefs about the task-value and user-friendliness of new technology, respectively. The shaded green boxes carry important attitude formation constructs for the basis of research model development.



(Source: Davis, 1989)

Figure 3.2: Technology Acceptance Model

The TAM has received extensive empirical support through validation, application and replication in many online contexts to gauge user perceptions of system use and the probability of adopting an online system (Mathieson, 1991; Plouffe, Hulland, & Vandenbosch, 2001; Plouffe, Vandenbosch, & Hulland, 2001; Chen, Gillenson, & Sherrell, 2002; Kamarulzaman, 2011; Yousafzai & Yani-De-Soriano, 2012).

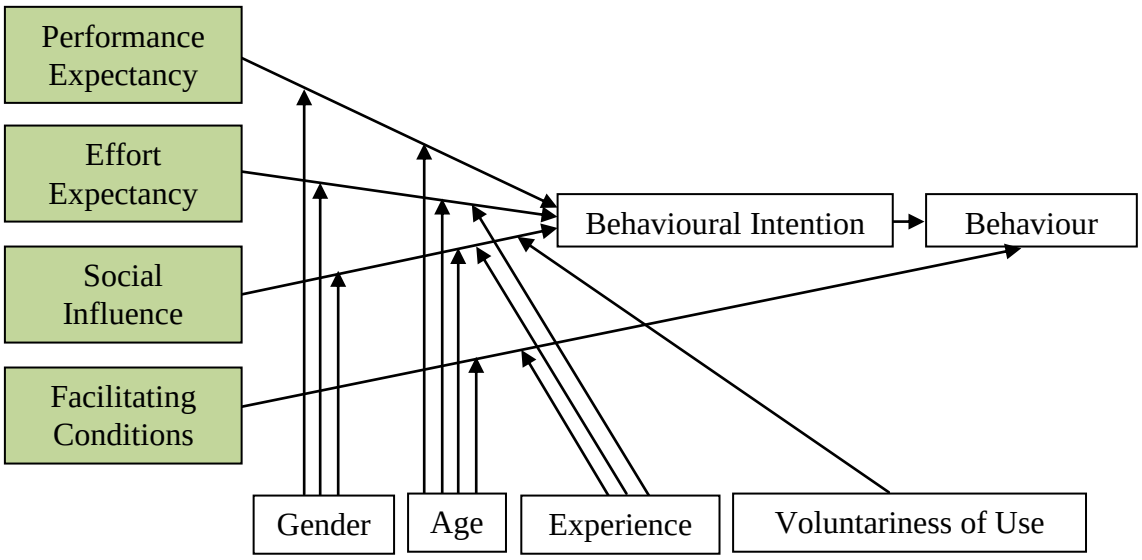
The logic inherent in TAM is that the easier the mastery of the technology, the more useful it is perceived to be, thus leading to a more positive attitude and greater intention towards using the technology, and, consequently, greater usage of the technology. Since the TAM has been applied and proved by many studies previously, it aids in the understanding of this research on social media adoption among consumers.

3.2.1.4 Unified Theory of The Acceptance and Use of Technology

Building on TAM, the Unified Theory of Acceptance and Use of Technology (UTAUT) was introduced by Venkatesh, Morris, Davis, & Davis (2003). The UTAUT includes a broad range of behavioural antecedents to the adoption of technology, which specifically aim to explain intentional behaviour to use an IT and subsequent usage behaviour.

The UTAUT holds four prominent constructs that is: (i) performance expectancy, (ii) effort expectancy, (iii) social influence, and (iv) facilitating conditions. These constructs are direct determinants of usage intention and behaviour towards technology. Gender, age, experience, and voluntariness of use are posited to mediate the impact of the four key constructs on usage intention and behaviour.

The model is noted to include many influences on behavioural response to adopt a technology. They are dominated by the direct effect, that each construct exerts on adoption (Compeau, Meister, & Higgins, 2007). Compeau et al. (2007) demonstrate that the encouragement of others in an individual's reference group influences the user's perceptions of the outcomes of adopting a computer. If one goal is to predict acceptance or use, then focusing on the direct effect is acceptable. But if one is looking to use the results to influence behaviour, then it is more important to understand the way in which the antecedents might operate.



(Source: Venkatesh et al., 2003)

Figure 3.3: Unified Theory of Acceptance and Use of Technology

Thus, based on the discussion in the sub-section, the UTAUT is used interchangeably with TRA, TPB and TAM in developing the theoretical research foundation towards understanding how consumers develop attitude and behaviour towards social media. The shaded green boxes in Figure 3.3. carry important attitude formation constructs for the basis of this research model.

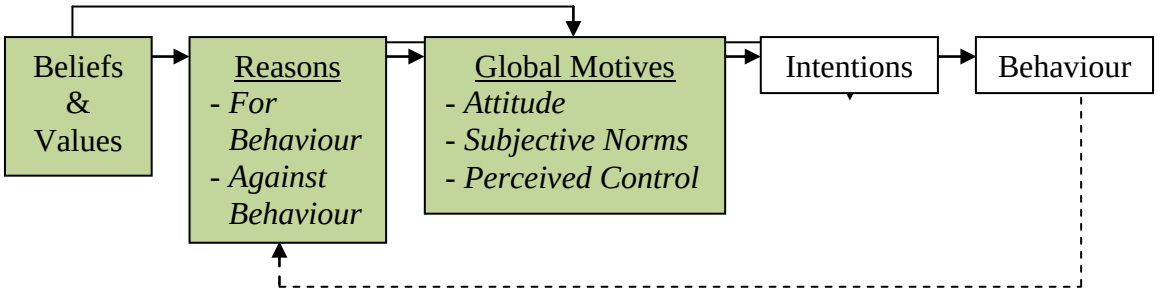
3.2.1.5 Behavioural Reasoning Theory

Building on the earlier behavioural response models, namely, TRA and TPB, Westaby (2005) proposed the Behavioural Reasoning Theory (BRT), which postulates that 'reasons' should connect beliefs, global motives (i.e. attitudes, subjective norms and perceived control), intentions and behaviour together.

The theory assumes that reasons influence global motives and intentions by justifying and rationalising the individual's actions. Behavioural intention models like the TRA and TPB are based on belief concepts (i.e. behavioural, normative and control beliefs), which offer deeper understanding towards the context-specific factors affecting behaviour. Westaby (2005) explains that reasons deserve theoretical consideration since they provide predictive validity in a number of judgment and decision making contexts.

Hence, BRT distinguishes global motives, context-specific beliefs and reasons. Global motives are defined as broad substantive factors that consistently influence intentions across diverse behavioural domains, which include attitude, subjective norms and perceived control. These constructs have been proven to have a significant relationship with behavioural response (Ajzen, 1991; Fishbein & Ajzen, 1975). Context-specific beliefs and reasons are distinguished from global motives under the presumption that they are the preceding antecedents of global motives and intentions.

The BRT is conceptualised in Figure 3.4. In the model, reasons are assumed to operate through justification and defence mechanisms, and are also expected to directly predict behavioural response beyond global motives. Reasons are the result of an individual's beliefs and values. Beliefs and values are predicted to have a direct impact on global motives due to automated processes that circumvent deeper reason activation. The dashed arrow connecting behaviour and reasons reflects the reinforcement of reasons after the conduct of a behaviour, which is used to support, distorted or rationalised behaviour.



(Source: Westaby, 2005)

Figure 3.4: Behavioural Reasoning Theory

Westaby (2005) highlights that 'reasons' are fundamental in the relationship between people's beliefs, global motives, intentions and behaviour, which reveal the following:

i. Reasons (for and against behaviour) are differentiated from global motives and intentions, and strengthen the prediction of intentions beyond those explained by global motives.
ii. Intentions are the result of the information processed from global motives and reasons
iii. Beliefs and value concepts are related to the reasons for and against behaviour

iv. Traditional belief concepts have direct linkages to global motives and intentions, unaccounted for by reasons.

Westaby (2005) stresses that reasons for and against behaviour should not be used in isolation but congruent with each other. Furthermore, the integration of global motives and belief concepts in addition to reasons are crucial to provide a more comprehensive understanding of behaviour. ***Hence, the BRT helps to explain additional motivational determinants of behaviour beyond traditional models. The BRT is mainly used as the basis for studying attitude towards services and technology innovation (Talukder & Quazi, 2011; Maiyaki, Sanuri & Mokhtar, 2012). The shaded green boxes in Figure 3.4 also carry important attitude formation constructs for the basis of this research model, which will be discussed in Part IV, and further elaborated upon in Chapter Four.***

In conclusion, fundamentally, the five prominent theories presented highlight the constructs that lead to attitude formation that drives behaviour (in this research context, it is related to technology), which is critical for this research. ***With the explanation of these theories, there are four things that are considered for the development of this research framework – the attitudes, beliefs, values and behavioural response. Understanding the connection between these four helps to explain the interrelationships between the components of attitude: (i) affective, (ii) cognitive and (iii) conative, as discussed in the sections below.***

3.3 Components of Attitude

According to the Tri-Component Attitude Model (TCAM), attitude consists of three major components: (i) affective, (ii) cognitive and (iii) conative. Cognitive and affective are the type of response consumers exhibit towards stimuli or objects. Affective refers to feelings about stimuli in the environment whereas cognitive refers to thinking, such as belief about a particular stimuli or object. Affective responses can be favourable or unfavourable and vary in intensity. On the other hand cognitive responses derive from the mental structures and processes that involve thinking, understanding and interpreting stimuli or objects. They include meaning and beliefs that consumers have developed from their experiences towards the stimuli or objects (Rosenberg & Hovland, 1960; Eagly, Mladinic & Otto, 1994; Van den Berg, Manstead & Van der Pligt, 2006).

The responses made that are based on affective and cognitive lead to conative or overt behaviour. Conative refers to a set of physical actions that can be directly observed and measured by others (Rosenberg & Hovland, 1960; Olson & Maio, 2003). In this research, conative or overt behaviour refers to the adoption behaviour that consumers make towards social media. The important element that needs to be understood in this research very much concerns on the affective and cognitive responses because these two states of behaviour push the consumer's need towards adopting social media.

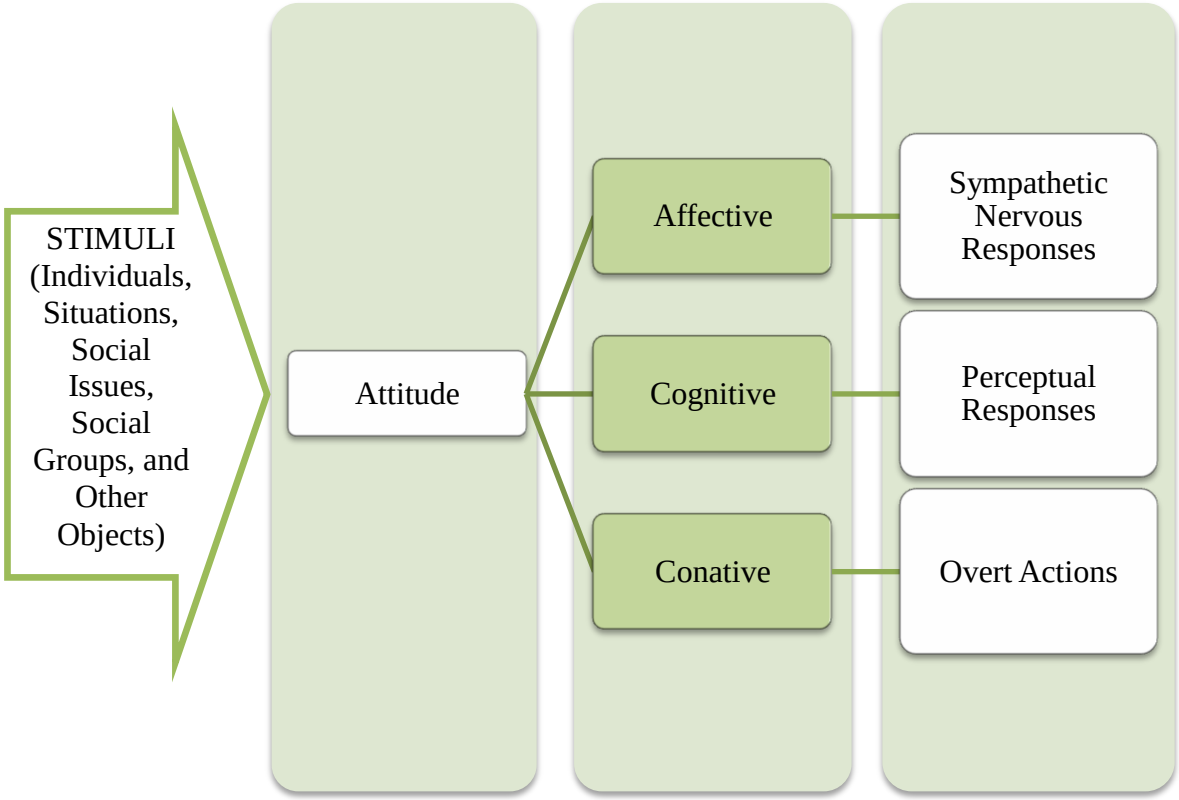
In order to gain a better understanding of the affective and cognitive relation, this section examines the nature of different behavioural criteria. Similar to attitude and belief formation, behaviour can vary in terms of its specificity (Rosenberg & Hovland, 1960). Attitude is viewed as a complex system comprising the person's beliefs about the object, his feelings towards the object and his action tendencies with respect to the

object (Fishbein & Ajzen, 1975). Also, Zanna and Rempel (1988) and Eagly and Chaiken (1993) conceptualise attitude as a summary of evaluations of objects that are derived from the evaluative implications of affective, cognitive and conative attitude.

Rosenberg and Hovland's (1960) schematic representation of these three components (i.e. affective, cognitive and conative) that make up attitude, indicates that all responses to a stimulus object are mediated by the person's attitude towards the object. That is why, in the attitude formation, the different responses are classified into the three categories, as explained above: (i) affective, which relates to the sympathetic nervous responses and verbal statements of belief, (ii) cognitive, which relates to the perceptual responses and verbal statements of belief, and (iii) conative/behavioural response, which relates to the overt actions and verbal statements concerning behaviour. Certain responses are most indicative of the cognitive component, while others are indicative of the affective component and the conative component (Rosenberg & Hovland, 1960; Zanna & Rempel, 1988; Eagly & Chaiken, 1993; Huskinson & Haddock, 2004).

Although these components are mutually associated, previous researchers have determined that they are actually distinguishable in some ways. Breckler (1984) who studied the empirical validation of TCAM finds that these three components provide a significantly better fit than a component model as proposed by earlier studies, for instance, Doob (1947), Katz (1960), Allport (1967), Fishbein (1967), and Triandis (1967). However, Eagly and Chaiken (1993), and Crites, Fabrigar, and Petty (1994) treat the TCAM as sharing a synergetic relation, hence positive feelings can be accompanied by positive beliefs and positive behavioural responses, which also goes vice versa. Thus, in the development of this research framework, TCAM is used to justify the state of response made concerning social media adoption. A complete

description of attitude that requires all three components of attitude is assessed in Figure 3.5.



(Source: Rosenberg & Hovland, 1960)

Figure 3.5: Tri-Component Attitude Model

Among the most discussible constructs in TCAM are affective and cognitive. A large body of research has examined the role of affective and cognitive response and has confirmed that the affective versus cognitive components leads to different attitudes (Edell & Burke, 1987), evaluations (Zauberman, Diehl & Ariely, 2006) and decisions (Metcalfe & Mischel, 1999). In addition, in the coexistence of cognitive and affective components, the affective response might influence cognitive response because affect could precede the cognitive inputs and bias cognitive thinking, or can be treated otherwise (Epstein, 1994).

Moreover, within the contemporary study of social psychology, previous research has also sought to uncover situations in which attitudes should derive an affective or cognitive response. Huskinson and Haddock's (2004) study on individual differences in attitude structure find that affect-based appeal is more persuasive among individuals with an affective attitude (as compared to cognitive), whereas individuals with a cognitive attitude are more persuaded by cognitive appeal (as compared to affective).

However, other studies have also assessed the relative contribution of affective and cognitive to the prediction of attitude. Abelson, Kinder, Peters, and Fiske (1982), Breckler and Wiggins (1989), Haddock, Zanna, and Esses (1993), and Eagly et al. (1994) used a diverse range of attitude objects, such as inter-group attitudes, political leaders and social policy issues to test affective-cognitive or cognitive-affective relations prior to conative or behavioural response. They found that the favourability of individuals' affective-cognitive responses are positively correlated with the favourability of their attitude.

Another study, by Millar and Tesser (1986), finds that a match between cognitive-affective and cognitively or affectively driven behaviour enhance the relation between attitude and behaviour. The mechanism held in their study is on the attitude towards puzzles (game). The findings highlight that the affective or cognitive component results in an overall attitude evaluation as more closely reflecting the emphasized component (either affective or cognitive), which, in turn, improves the attitude-behaviour relationship.

Zanna and Rempel (1988) conceptualise that there may be chronic individual differences in the attitude structure between consumers based on these components.

Some may have an attitude that is primarily affect-based, that is, consistent with the favourability of their feelings; whereas other individuals may have attitudes that are primarily cognition-based, consistent with the favourability of their beliefs. As these two components are mutually related, the individual might or might not utilise both types to an equal degree depending on the situation (van den Berg et al., 2006).

All of these findings have improved the design of this research framework, which discusses the important roles of affective and cognitive responses in guiding attitudes. It is believed that TCAM is critical for this research because this research studies new media, i.e. social media, which is introduced using Internet technology, where it is presumed that consumers have yet to form a behaviour on what social media is. Thus, having to categorise attitude into these components, leads to understanding insights into the mental processes of the consumer, i.e. affective and cognitive, which are central for designing the social media marketing strategy.

Using this paradigm, the adoption stage that leads to conative response (i.e. behavioural response), is therefore divided into two responses – affective (explains social media needs) and cognitive (explains the need for social media technology innovation). Having reviewed attitude formation, the next section will look into the motivation that drives behavioural conduct to take place.

3.4 Motivation

The motivational research that includes all types of human motive was undertaken by Ernest Dichter in the 1950s. Dichter's research uncovered the consumers' subconscious or hidden motivation that suggests that consumers are not always aware of the reasons

for their actions (Schwarzkopf, 2007). Gardner (1959) developed a list of assumptions concerning the forces that influence human behaviour, as follows:

i. Humans have a strong drive and energy, which must be acted upon for sustaining life and well-being.
ii. Humans are influenced by the broad social environment in which personal ends are pursued, life is led and needs are satisfied.
iii. Humans social influences are their immediate family, neighbourhood, and community environment. Each of these influences impose certain patterns of life and behaviour in respect of hope and aspiration. Hence, human motivation consists of basic needs and life experiences that help to develop personality.
iv. Each human has their own personality, however the broad patterns of commonality within certain groups develop general patterns that influence common personalities and behavioural expressions.
v. Humans process symbolic communication from the meaning they receive and interpret the words, objects, actions, pictures consciously and subconsciously.

Based on these assumptions, it is noted that human reaction forms a complex human behaviour, where need arouses motivation. Human behaviour often fulfils more than one need (Peter & Olson, 2010). There are two opposing philosophies concerning this, in which one comes from the behaviourist school and the other from the cognitive school.

The behaviourist school considers motivation to be a mechanical process, in which behaviour is seen as the response to a stimulus; thus, elements of conscious thought are ignored (Mukherjee & Hoyer, 2001; Escalas & Luce, 2003; Dahl & Hoeffler, 2004; Schiffman et al., 2010; Zhao, Hoeffler & Zauberman, 2007, 2011), while the cognitive

school believes that all behaviour is directed at goal achievement. Needs and past experiences are reasoned, categorised and transformed into attitudes and beliefs that act as predispositions that focus on helping the individual to satisfy their needs. Together, these factors determine the action that a person takes to satisfy a particular need (Murphy, Murphy & Newcomb, 1937; Doob, 1947; Katz, 1960; Allport, 1967; Fishbein & Ajzen, 1975; Schiffman et al., 2010; Severin & Tankard, 2010).

Hence, in developing this research, essentially, the assumptions of needs and motives need to be put together as evidence that offers useful insights into understanding the human motives that lead to the formation of social media behaviour. In doing so, firstly the definition of motivation is tackled in the coming section.

3.4.1 Definition of Motivation

According to Murphy (1947, p99), motivation is defined as:

> *"A general name for the fact that an organism's acts are partly determined by its own nature or internal structure"*

This definition is among the earliest conceptions of motivation inferred. In addition, Schreier (1957) rationalises that the word motivation derives from the word 'moving', which explains how humans are being moved without being pushed. Schreier suggests that there must be something within humans that has the power to push them forward. In 1963, Gellerman further explained motivation by describing that motivation works as a speculation about a purpose that is expected to find some immediate and obvious goal, such as money, security or prestige. Based on this, Gellerman asserts that the ultimate of human motivation is to make the self-concept real.

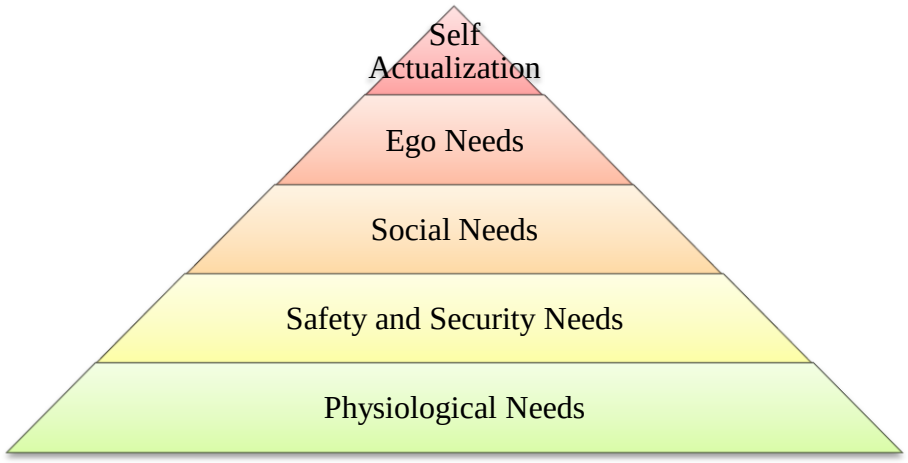
However, in 1970, Abraham Maslow developed a simplified version of human motivation in which he defines motivation as seeking need gratifications. Maslow's definition of motivation appears to exclude behaviour from motivation. According to him, behaviour does not directly seek the gratification, and even learning from the need reduction would not be suitable to be classified as motivation. Motivation comes from within one's self that pushes to create a certain level of needs and wants, which is greater than their learned behaviour.

Based on these explanations, it is noted that motivation acts as the driving force within individuals that pushes them to act from within, in which these driving factors are produced by a state of tension, which usually exists as a result of an unfulfilled need. Individuals need to strive consciously and subconsciously to reduce tension by setting and attaining goals.

Accordingly, it is assumed that having a set of motivations will force consumers to fulfil their needs and thus acquire self-concept. This supposition remains as the idea of this research, which aims to look at the motivational drivers that lead consumers to adopt social media.

3.4.2 Consumer's Hierarchy of Needs

As explained, humans vary in needs and wants. These needs and wants drive a different motive. Maslow (1970) formulated a widely used theory of human motivation that is based on the notion of a universal hierarchy of human needs. He identifies five basic levels of human need, which rank in order of importance from a low level to a higher level of need, as illustrated in Figure 3.6.



(Source: Maslow, 1970)

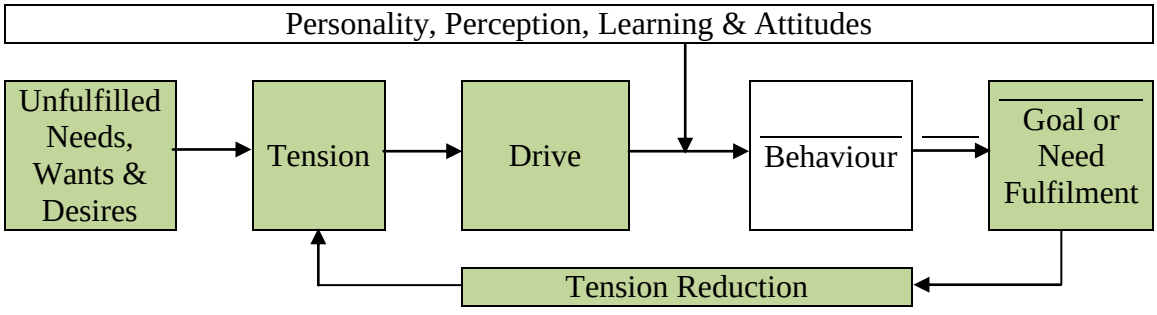
Figure 3.6: Abraham Maslow's Hierarchy of Needs

Maslow (1970) invokes that accomplishing needs will let humans acquire greater needs, hence the process of fulfilling human needs is endless. That is why Maslow organises human needs in a series of levels of importance. At the lower level are the psychological needs. When human psychological needs are reasonably satisfied, the need to reach the next higher level dominates. At the peak of the hierarchy are the self actualization needs that help humans realise their potentialities for continuation of self-development.

Maslow's (1970) hierarchy of needs has received wide acceptance in much social science research because it appears to reflect the motivations of many people in society towards reaching personal goals and fulfilment. Some of the research that has used Maslow's Theory of Motivation includes the studies conducted by Anderson & Gaile-Sarkane (2011), which uses Maslow's motivation needs to analyse sustainable development of entrepreneurship; Datta (2010), who uses Maslow's motivation needs to study the ecology of basic human needs; and Yalch and Brunel (1996), who use Maslow's hierarchy of needs to study consumer judgment on product design.

Based on the above, it can be concluded that the connection between motivation and needs fulfilment works in a way that higher goals are sought because all human motivational forces are performed based on goal orientation. The same goes for the context of social media in which the consumer adopts social media due to the fact that this medium gives a certain level of needs satisfaction, which, in the end, helps them establish their goal from social media activities. Understanding Maslow's Theory of Motivation gives strong support in relating human behaviour to the recent behaviour of social media consumers.

Another significant study of motivation was conducted by Durgee, O'Connor and Veryzer in 1996, in which the value of product wants were observed, which were used to explain how consumers set goals on the basis of personal values and how they select behaviour that they believe will help them achieve their desired goals. Durgee et al.'s (1996) model of motivation process is similar to Maslow's (1970) hierarchy of needs, as depicted in Figure 3.7.



(Source: Durgee et al., 1996)

Figure 3.7: Model of Motivation Process

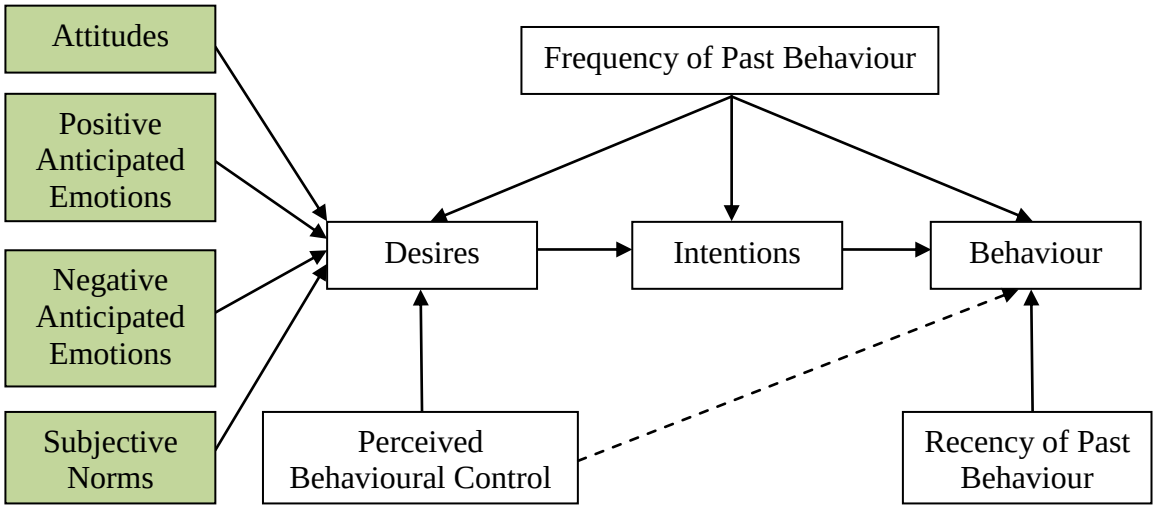
However, Durgee et al.'s (1996) model of motivation process is much clearer in explaining motivation compared to Maslow's (1970) model. Durgee et al.'s (1996) model of motivation process can be treated as a continuation from Maslow's (1970) hierarchy of needs model. The shaded green boxes are given greater attention in the design of this research theoretical framework, which is explained in Part IV and further elaborated upon in Chapter 4.

In addition to these two models, it is noted that human motivation is a dynamic construct that changes constantly due to life events, which, in this research, is referred to as the social media phenomenon. Human needs and goals change and grow in response to the physical condition, environment, interactions with others and experiences. As individuals attain goals, they develop new ones. The new needs that the individual develops, which, in this respect, is the need for social media, indeed requires further investigation because need-driven human activities never end due to the fact that needs are never fully satisfied.

3.4.3 Connecting Consumer Emotions and Desire

When one need is acquired, another need arises. Individuals that achieve a goal, set new and higher goals (Maslow, 1970; Durgee et al., 1996; Olson & Maio, 2003; Datta, 2010; Schiffman et al., 2010; Anderson & Gaile-Sarkane, 2011). The growing and never ending human motivation literature is used to support the establishment of this research. Consumer motivation to use social media is presumed to be different from other types of media needs because the uniqueness of technology innovation plays a role in helping to entice social media needs.

In relation to that, the Model of Goal-Directed Behaviour (MGB) proposed by Perugini & Bagozzi (2001) explains how acquired needs are derived from connecting human emotions and desire. Briefly, the MGB theorises that anticipated emotions and desires are significant predictors of behaviour. As can be recalled from the preceding discussion in Section 3.2.1 on TRA, TPB, TAM, UTAUT and BRT, all of these theories propose that attitudes, subjective norms and perceived behavioural control influence predicted behaviour. These relationships are also shown in Figure 3.8 with an additional construct linking them to emotions. The shaded green boxes are given emphasis in the design of this research theoretical framework, which is explained in Part IV and further elaborated upon in Chapter Four.



(Source: Perugini & Bagozzi, 2001)

Figure 3.8: Model of Goal-Directed Behaviour

In MGB, one of the main revisions made to the TRA and TPB is the incorporation of anticipated emotions as additional constructs to the first level of the TRA and TPB. This can be noted from Figure 3.8, which illustrates the relationships between variables in the MGB. Anticipated emotions concern the feelings that are expected to arise from the

achievement of goals. In the MGB, differentiation is made between positive and negative anticipated emotions. Positive anticipated emotions are the perceived emotional consequences that arise from the successful realization of goals, while negative anticipated emotions are the probable emotional consequences arising from the failure to achieve goals.

When connecting emotions and desires together, consumers will have to consider the emotional consequences of succeeding or failing to accomplish a goal, which takes place prior to the decision of actually performing the action (Perugini & Bagozzi, 2001). Perugini and Bagozzi (2001) explain that although attitudes, subjective norms and perceived behavioural control provide reasons for acting, they do not incorporate explicit motivational content needed to induce the intention to act. In addition, the MGB posits that frequency of past behaviour and recency of past behaviour should be included in goal-directed action. The frequency of past behaviour is hypothesised to impact desires, intentions and behaviours, while the recency of past behaviour only influences behaviour. Behaviour that is routinely performed reflects the strength of habit, and, therefore, stimulates future behaviour. The recency of past behaviour is posited to influence behaviour through its influence on information processing, which may indirectly signify the actualisation of intentions.

In essence, anticipated emotions, along with attitudes, subjective norms and perceived behavioural control are mediated by the desire to form behaviour (i.e. consumer evaluates perceived emotional consequences that arise from goal attainment or goal failure). These emotions are channelled through desires, which, consequentially, provide the motivational force directing the strengths of the antecedents towards performing the behaviour.

3.5 Attitude and Motivation in Relation to Social Participation

The usual assumption on the changing of attitudes is that it leads to the possibility of influencing behaviour, which helps to improve social relations and produce social change (Dholakia et al., 2004). Part I posits that a person's belief about an object is determined by the perceived probabilistic relation between object and attribute. The formation of one belief leads to the development of other inferential beliefs. A person's attitude is determined by their salient beliefs about the attitude object, beliefs about a given behaviour and beliefs about the expectations of relevant others that influence the overt behaviour itself (Fishbein & Ajzen, 1975).

The review of the literature up to this point has clarified the distinction between belief, attitude and behaviour, which is essential for an analysis of the behavioural changing process. Thus, in order to change behaviour, an attempt should be directed at the intention to perform the behaviour. To change that intention, it is necessary to focus on attitude towards the behaviour or subjective norms (Bagozzi, Dholakia & Pearo, 2007). Attitude towards the behaviour or any other attitude can be changed by influencing the primary beliefs about the attitude object or the evaluation of its attributes.

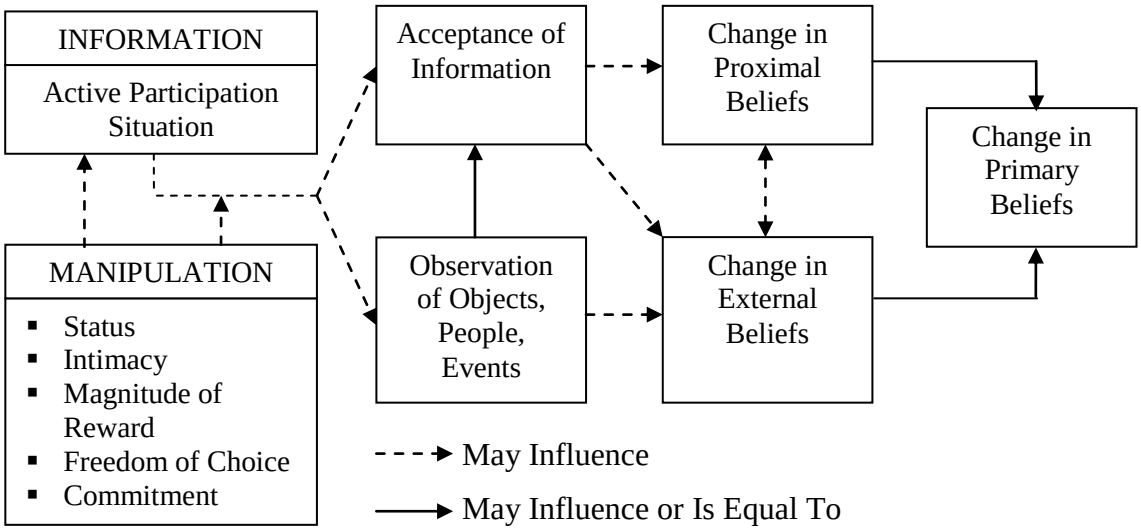
In this context of study, stimuli or object refers to social media. As can be noted in Chapter Two, social media is an agent that enables social participation. Use of social participation as a means of bringing about the change can take many different forms, such as contact and interaction with other people, choice between several alternatives or performance of some other behaviour. It is expected that change experiences of this kind will produce changes in beliefs, attitudes and behaviour (Fishbein, 1967; Peter & Olson, 2010).

Many studies are concerned with the factors that influence attitude change produced by social participation. Numerous variables have been proposed, and the degree to which the object mediates the effectiveness of social participation has also been previously investigated. From these different findings, social interaction experience allows the participant to directly observe various objects, people and events, which entails a large number of object-attribute links. In most situations, the individual perceives that certain people and objects are present in the environment, and that it possesses certain attributes, which observes some of the behaviours performed by others in the situation. This includes one's own behaviour, which is subject to change (Dholakia et al., 2004; Nov, Naaman & Ye, 2010; Valenzuela et al., 2009).

These findings are in line with Fishbein and Ajzen (1975) who conjecture that individuals who perceive possibilities between behaviour and outcome acquire new descriptive beliefs about themselves, about other people, about the consequences of their own behaviour or that of others, and about their environment. Figure 3.9 illustrates the possible effects of attitude change manipulation. The broken arrow leading to change in primary belief indicates that certain manipulations may change the nature of the interaction, thereby exposing subjects in different conditions to different items of information is necessary. Attitude change manipulation also directs the participant's attention to some items of information, thus, influencing the amount of change in external beliefs.

Accordingly, in respect of social participation, Dourish (2001) provides the concept of embodiment that explains how humans act, participate and contribute through computer mediation. Embodiment in this respect means that humans do not act on technology as it is, but also act through it; a concept that indicates the affordance of the technology is

part of the participation and contribution of the members. This is to the extent that technology affords a socially meaningful and satisfying interaction, and motivates and sustains social activity and social benefits. The social ability through computer mediation is not solely a feature of the tool, the user or the task, but rather the relationship among them, which, undoubtedly, forms an attitude towards technology.



(Source: Fishbein & Ajzen, 1975)

Figure 3.9: Social Participation Process

From another perspective, Preece (2001) identifies that the construct of social ability is related to online communities, which is also noted as being part of the social media element. The term social ability is used to describe a state of the community that is influenced by the purpose, people and policies of the community. Laffey and Lin (2006) assess the social ability in the online environment context as an experience and perception for social interaction that infers the state of the community, which makes it inviting for social participation and interaction.

Therefore, as a minimal initial step in trying to understand consumer adoption behaviour towards social media, the interrelations between all of these factors (i.e.

attitude, motivation and social participation) is indeed necessary to be considered. Conclusively, many studies have supported that some behaviours are not consistent and are prone to change due to the fact that attitude and belief are influenced by the change agent (i.e. social media and technology innovation).

To conclude the review made in Part I, the theory and model used as the foundation in drawing the research framework is summarised in Table 3.2. This study draws upon these theories and model findings from the attitude and motivation literature, which is used to build the fundamental understanding of this research. The independent constructs highlighted in the table refers to the dominant construct that is used as a root in the development of the research model, which is explained in Chapter Four.

Table 3.2: Summary of Theories and Models Pertaining to Research Framework Bases

Theory	*Independent Construct*		*Theory Application*
Theory of Reasoned Action (Fishbein & Ajzen, 1975) Theory of Planned Behaviour (Ajzen, 1985)	i. ii. iii.	Attitude Towards Act or Behaviour Subjective Norms Perceived Behavioural Control	Apply as a foundation to understand how consumers develop behaviour towards social media adoption.
Theory of Technology Acceptance Model (Davis, 1989)	i. ii. iii.	External Variables Perceived Usefulness Perceived Ease of Use	Apply as a foundation to understand how consumers develop behaviour towards social media as a technology medium.
Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003)	i. ii. iii. iv.	Performance Expectancy Effort Expectancy Social Influence Facilitating Conditions	Apply as a foundation to understand the broad antecedents of behavioural response towards technology adoption.

Theory	*Independent Construct*		*Theory Application*
Behavioural Reasoning Theory (Westaby, 2005)	i. ii. iii. iv.	Beliefs and Values Reasons (For/Against Behaviour) Global Motives (Attitude, Subjective Norms, Perceived Control) Intention	Apply as a foundation to understand how consumers develop attitude and behaviour towards social media adoption.
Tri-Component Attitude Model (Rosenberg & Hovland, 1960)	i. ii.	Affective Cognitive	Apply to understand the adoption stages that lead to decision making (social media adoption)
Hierarchy of Needs (Maslow, 1970)	i. ii. iii. iv. v.	Self Actualization Ego Needs Social Needs Safety and Security Needs Physiological Needs	Apply to understand the connection between motivation and needs fulfilment, which works in a way that higher goals are sought because motivational forces are performed based on goal orientation (social media adoption.
Motivation Process Model (Durgee et al., 1996)	i. ii. iii. iv.	Personality, Perception, Learning & Attitudes Unfulfilled Needs, Wants & Desires Tension Drive	Apply to understand human motivation process that changes constantly due to life events, i.e. grow in response to physical condition, environment, interactions with others and experiences.
Goal-Directed Behaviour Model (Perugini & Bagozzi, 2001)	i. ii. iii. iv. v. vi.	Attitudes Anticipated Emotions Subjective Norms Perceived Behavioural Control Desires Intention	Apply to understand emotions in respect of attitudes, subjective norms and perceived behavioural control, which arise from goal attainment and goal failure. Emotions are channelled through desires that provide the motivational force directing the strengths of the antecedents.

From the broad literature that touches the core aspect of consumer behaviour in Part I, which is summarised in Table 3.2, it is thereby concluded that the important constructs that need to be given greater emphasis for the development of the research model are depicted in Figure 3.10.

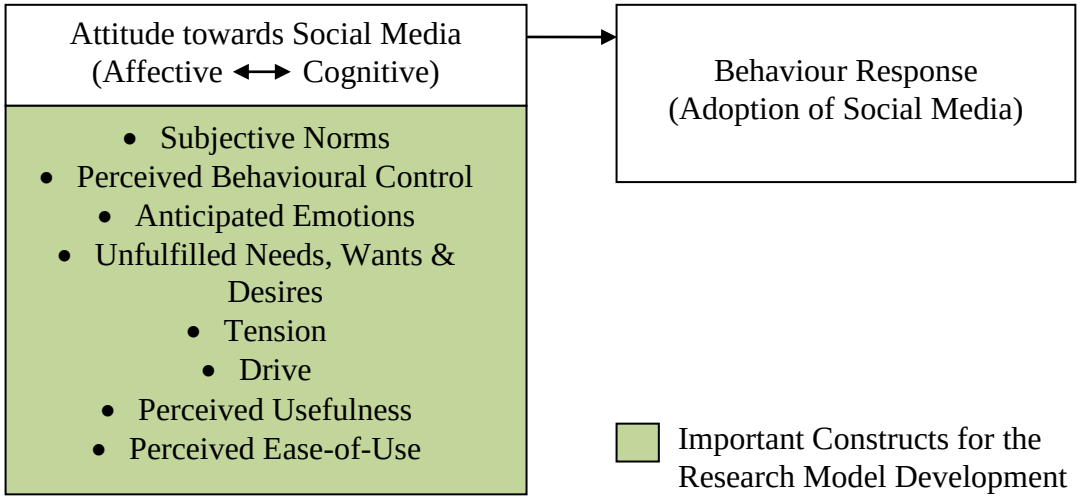


Figure 3.10: Important Constructs for Research Development

The following sections, Part II and Part III, will then look into the germane literature, which leads to the development of social media needs, and which is also categorised as the cognitive (discuss in Part I) and affective (discuss in Part III) responses towards social media adoption, which acts as the independent construct for this study.

PART II: INNOVATION CHARACTERISTICS DRIVE ADOPTION

3.6 Attitude Towards Technology Readiness

Prior to focusing on social media in the context of consumer behaviour per se, a discussion on social media technology readiness in general is viewed as being pertinent also. According to Parasuraman (2000), technology readiness is regarded as an overall state of mind resulting from mental enablers and inhibitors that collectively determine a person's disposition to use new technologies. Hence, it is defined as people's propensity to embrace and use new technologies to accomplish goals at home, at work and life generally.

The literature suggests that technology readiness works as the determinants of consumer behaviour towards using the technology. This is explained by Ziethaml, Parasuraman, and Malhotra (2002) in their study on e-shopping behaviour, which explains four multi-dimensional constructs with respect to consumer attitude towards technology:

i. Optimism – is a positive view of the technology and a belief that technology offers control, flexibility and efficiency in lives
ii. Innovativeness – is a tendency to be a technology pioneer and thought leader
iii. Discomfort – is a perceived lack of control over technology and a feeling of being overwhelmed by it
iv. Insecurity – is a distrust of technology and scepticism about its ability to work properly

Optimism is posited to have an influence on consumer intention for technology adoption. It is a general dimension that captures specific feelings, suggesting that

technology is a good thing (Ziethaml et al., 2002). On the other hand, Parasuraman and Colby (2001) find that technology optimists tend to need more control in life and are more prestige conscious. Consumers have the intention to accept technology no matter how useful the new technology is as long as they gain prestige through affiliation with the new technology. Among these four functions of technology readiness, innovativeness is arguably one of the most researched concepts in consumer behaviour discipline (Parasuraman, 2000; Rogers, 2003; Peter & Olson, 2010; Yousafzai & Yani-De-Soriano, 2012).

The innovativeness dimension is the core construct in technology readiness study that encourages the consumer to establish a certain attitude towards the technology (Parasuraman, 2000). It has been shown that the domain specific to innovativeness has a positive impact on consumer adoption. This reflects the tendency to learn and adopt innovations within a specific domain of interest (Ostlund, 1974; Goldsmith & Hofacker, 1991; Citrin, Sprott, Silverman & Stem, 2000; Goldsmith & Bridges, 2000; Ho & Wu, 2011). In the current research context, this form of innovativeness is proposed to be the mediator of social media adoption that links consumer attitude and the outcome of using social media.

Accordingly, individuals with high technology innovativeness are found to have stronger intrinsic motivation to use new technologies and enjoy the stimulation of trying new technologies compared to less innovative individuals (Dabholkar & Bagozzi, 2002), which is similar to the DIT.

Prompted by the substantial divergence noted in respect of social media aspects, as explained in Chapter Two, the current study attempts to test the effectiveness of

innovation on consumer behaviour by investigating the innovation characteristics that are presumed to have a strong impact factor in encouraging the speed of the adoption.

3.7 Perceived Newness and Innovativeness

The subject of innovativeness has been the focal interest for a wide range of social science disciplines in an attempt to understand the role of innovation in human behaviour. However, slow progress in the development of the innovation theory has occasionally attributed to inconsistencies in the classification of innovations (Garcia & Calantone, 2002; Adams, Tranfield & Denyer, 2011).

Collectively, many studies on technology innovation have been criticised for the lack of shared concepts and definitions (Garcia & Calantone, 2002). According to Adams et al. (2011), generally, research chooses to classify innovations according to three schemata: (i) newness or innovativeness, (ii) area of focus, and (iii) innovation attributes, which are considered to be the core concepts and constructs in innovation research.

In view of the different ways in which innovation is acquired, Adams et al. (2011) emphasises that between these schemata, the newness or innovativeness construct is widely used in much of the innovation research. Understanding of newness or innovativeness helps to develop the dynamics of the innovation process and innovation performance (Kleinschmidt & Cooper, 1991; Cheng & Van de Ven, 1996; Damanpour, 1996; Garcia & Calantone, 2002).

Securing these suppositions, McCarthy, Ridgway, Leseure, and Fieller (2000) suggest that the basis of innovation attributes relies on the innovation descriptive properties and qualities or features that innovation possesses. In this sense, innovation possesses attributes in accordance to what is assigned by individuals on the basis of their perceptions (Adams, Nelson & Todd, 1992; Dearing & Meyer, 1994).

In relation to the above, Rogers (2003) reports that if the perceived situations that are related to innovation are real, the outcome of innovation should also be real, thus encouraging adoption. Accordingly, Rogers developed a five factor framework that is conceptually distinct, but empirically interrelated through all five interrelated dimensions to explain the attributes of innovation. He asserts that relative advantage, compatibility, observability and trialability are positively associated with adoption whilst complexity has a negative relationship. Subsequent studies have replicated (Lee, 2004; Kitchen & Panopoulos, 2010), modified (Agarwal & Prasad, 1997) and extended (Moore & Benbasat, 1991; Kearns, 1992) this framework and have largely provided empirical support for the assertion.

Based on the above, it is concluded that innovation is considered as one of the drivers that pushes the speed of technology adoption. Similarly, the concept of innovation has received considerable attention to explain consumer behaviour towards adopting a system or technology. ***Clearly, innovation attributes reflect the idea that the greater the innovation, the more room for adoption of the technology itself. Innovation is found to have a significant impact on the adoption and diffusion of technology. The section below discusses the Diffusion of Innovation Theory (DIT), which highlights the innovation attributes that lead to an increase in the speed of adoption in greater detail; in this study the context is social media.***

3.8 Diffusion of Innovation Theory

The Diffusion of Innovation Theory (DIT) is considered by Rogers (2003) to centre on the conditions that a new idea, product or practice are adopted by members of a given culture. It involves the social process by which an innovation is communicated through a channel over a specified time period among members of a social system and are spread throughout the social system. It relates to the communication process in which participants create and share information with the goal of reaching greater mutual understanding. The channel takes several forms, ranging from mass communication to interpersonal communication. In this respect, innovation gradually works out through a process of social construction, which is defined as:

> *'An idea, practice, or object that is perceived as new by an individual or other unit of adoption' (Rogers, 2003, p122)*

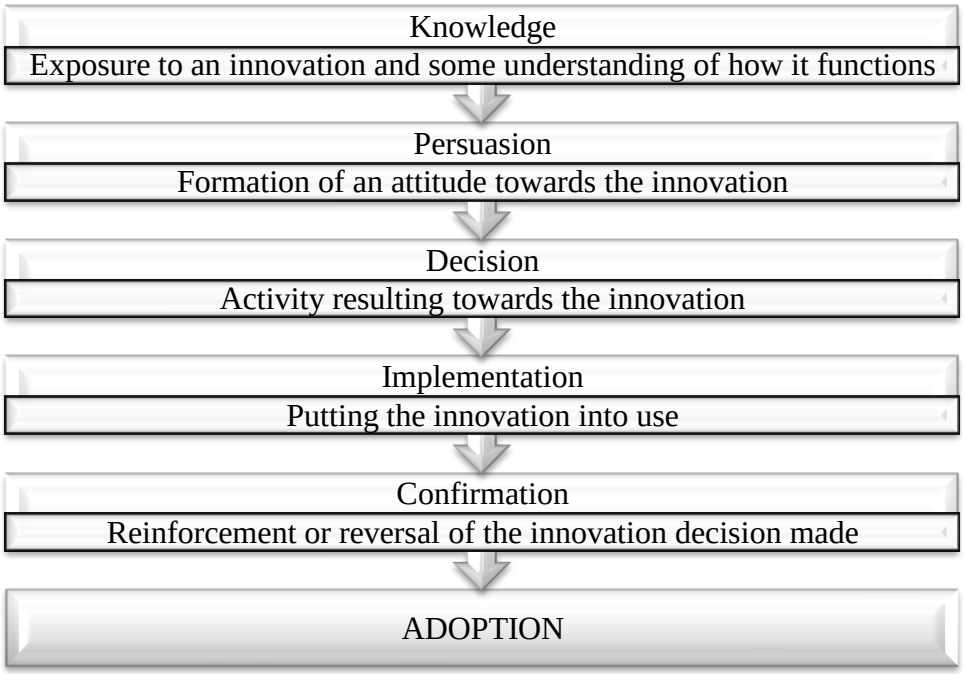
In the widely cited work of Rogers, he provides a synthesis of over 3,000 studies of adoption and diffusion of innovation. The results of this synthesis include numerous generalizations that explain the process through which innovations spread through populations of potential adopters. Among the more well-established generalizations the study focuses on these five elements:

i. Innovation Characteristics – innovation possesses certain characteristics that influence adoption (i.e. relative advantage, compatibility, complexity, trialability and observability)
ii. Innovation-Decision Process – the decision-making process (i.e. from knowledge of innovation down through persuasion, decision, implementation and confirmation) that occurs when individuals consider adopting a new idea, product or practice, as explained in Figure 3.11

iii. Category of Adopters – the characteristics of individuals that make them likely to adopt an innovation (i.e. innovators, early adopters, early majority, late majority, laggard)

iv. Diffusion Network – the action of certain kinds of individuals (i.e. opinion leaders or change agents) that accelerate adoption, especially when potential adopters view such individuals as being similar to themselves.

v. Diffusion Rate – the diffusion process that starts out slowly among pioneering adopters, reaches 'take-off' as a growing community of adopters is established and the effects of peer influence 'kick-in', thus leading to the S-Shaped cumulative adoption curve (as illustrated in Figure 2.2)



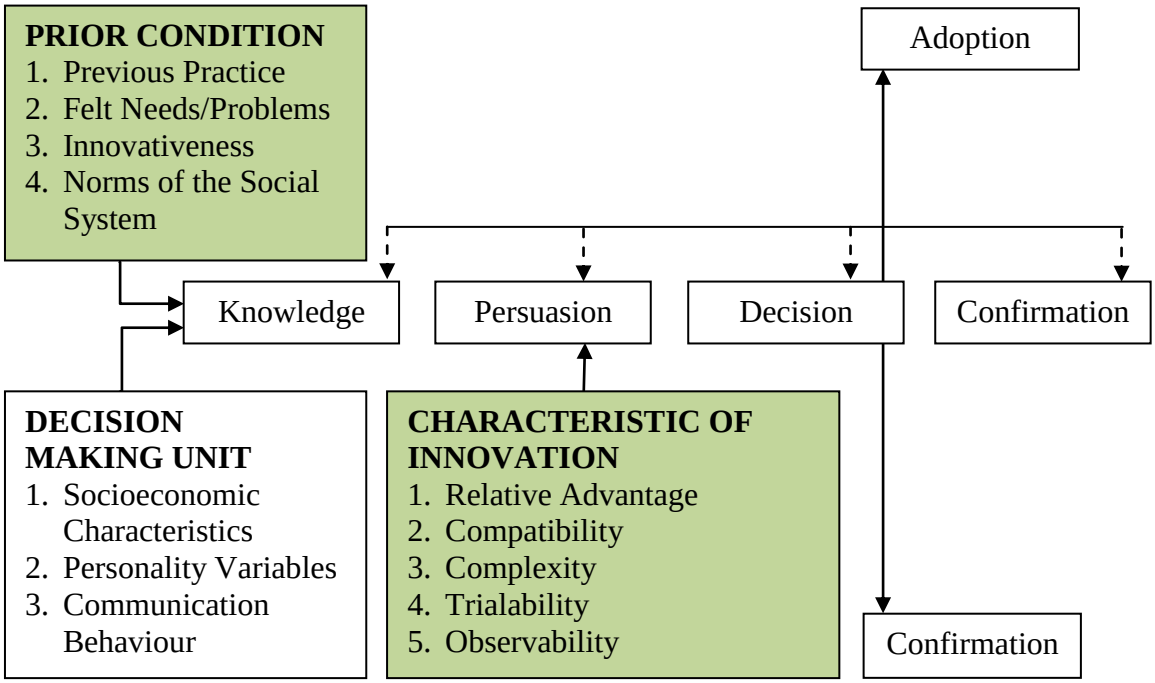
(Source: Severin & Tankard, 2010)

Figure 3.11: Stages of Innovation Decision Process/Adoption

Based on these five generalizations, Rogers (2003) points out that not all innovations have desirable consequences. Communication channels that are used as a point to end

the process of adoption or rejection of the innovation may either be interpersonal or mass media, and originate from localite or cosmopolite sources. These channels of communication play different roles in the diffusion process. It is noted that in the process of diffusion of innovation, mass media channels and the cosmopolite channels are relatively more important at the knowledge stage, whereas the interpersonal channels and localite channels are more effective at the persuasion stage. DIT predicts the mechanisms of social and technical change.

However, most of the empirical evidence recognises that innovation users usually go through various stages as they move from awareness to the knowledge stage to a decision to adopt, as depicted in Figure 3.11 by Severin and Tankard (2010). Thus, adoption behaviour is a process that contains stages, which occur over time (Rogers, 2003). Details on the diffusion of the innovation process are illustrated in Figure 3.12.



(Source: Rogers, 2003)

Figure 3.12: Theory of Diffusion of Innovation

Thus far, the contributions of the diffusion of innovation research are impressive and have achieved a prominent position. The multidisciplinary nature of diffusion of innovation research is a conceptual paradigm that cuts across various scientific fields. In recent decades, the results of diffusion of innovation research have been incorporated into social psychology, communication, public relations, advertising, marketing, consumer behaviour, public health, rural sociology and other fields. ***The investigation of diffusion of innovation research on the salient behaviour of the individual has significant social consequences over consumer behaviour and attitude, which is deemed to have a strong impact on motivating social media adoption. The highlighted green boxes emphasise the important construct that is used for the development of the research model.***

3.8.1 Diffusion of Innovation and Social Change

The diffusion of innovation approach also studies social change and offers a particularly useful means of gaining an understanding of change, because, generally, innovation transfers through communication, the effects of which are relatively easy to notice. On a practical note, individuals can understand social change processes more accurately if the spread of innovation is followed over time through the structure of a proper communication and social system (Rogers, 2003).

Rogers (2003) highlights that the focus of diffusion of innovation research on tracing the spread of an innovation through a system over time and across space has the unique quality that can affect the behavioural change process. The conceptual and analytical strength of this theory is gained by incorporating time as an essential element in the analysis of human behavioural change.

The diffusion of innovation research has a pragmatic appeal in getting research results utilised where the diffusion approach promises a means to provide solutions to solve a particular social problem or to fulfil a particular need. The diffusion approach helps connect research-based innovations with potential users of such innovations in the knowledge-utilization process (Rogers, 2003).

In summary, this section explains innovation as an important construct that relates consumer behavioural aspects with technology. ***This review provides theoretical links and understanding between behavioural and technological factors that help to speed up innovation. To comprehend the nature of social media, as explained in Chapter Two, a complex model of the factors that influence behaviour is needed, including the direct and indirect effect. The following section will discuss the characteristics of innovation, which is the focus of this research as it represents a rich set of influences that have been found to affect adoption under numerous technology settings.***

3.8.2 Characteristics of Innovation

The perceived attributes of an innovation explain the increase in the rate of adoption of an innovation. Most of the variance in the rate of adoption of innovation is explained by five attributes, namely, relative advantage, compatibility, complexity, trialability and observability (Rogers, 2003). These five attributes are described as follows:

i. Relative Advantage – is the degree to which an innovation is perceived as better than that which it supersedes. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption is likely to be.

ii. Compatibility – is the degree to which an innovation is consistent with existing values, past experiences and the needs of the potential adopter. Innovations that

are more compatible with prevalent values and norms of a social system will be adopted more rapidly than an innovation that is incompatible. Incompatibility is often a problem that marketers face when introducing an innovation

iii. Complexity – is the degree to which an innovation is perceived as difficult to understand and use. In most cases, new ideas that are simpler to understand will be adopted more quickly. If the complexity if the innovation outweighs the benefits, the innovation is unlikely to be adopted.

iv. Trialability – is the degree to which the innovation is experimented with on a limited basis. New ideas that can be tried on a partial basis will generally be adopted more quickly than innovations that are not divisible. Through trialability, the potential adopter would be able to see the results or benefits of the innovation.

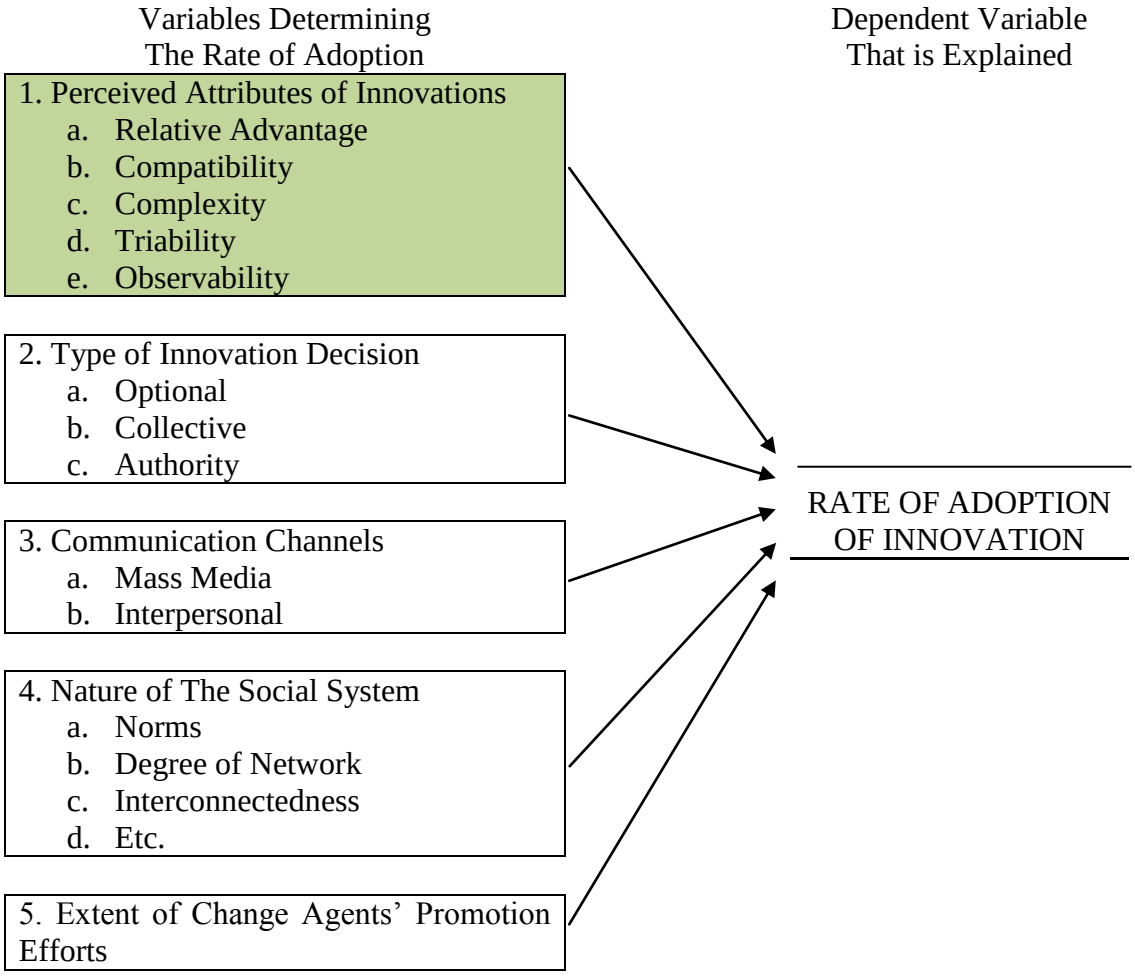
v. Observability – is the degree to which the results of an innovation are visible to others.

In addition to these five perceived attributes of innovation, other variables, such as the type of innovation decision, the nature of communication channels diffusing the innovation at various states in the innovation decision process, the nature of the social system in which the innovation is diffusing and the extent of change agents' promotion efforts in diffusing the innovation, are presumed to affect innovation's rate of adoption.

In explaining DIT, this research chose to focus on the innovation characteristics posited by Rogers (2003). These attributes suggest that an individual's combined perception of the innovation's attributes drive their adoption decision (Roach, 2009). Among previous researchers that have used these innovation characteristics to explain the adoption of technology driven innovations and for understanding the behaviour in relation to

product and new product development are Kleinschmidt and Cooper (1991), Chen, Gillenson and Sherrell (2002), Kleijnen et al. (2004) and Pedersen (2005).

Among these variables, the perceived attributes of innovation have been extensively investigated and been found to explain about half of the variance in the rate of adoption of the innovation. However, little diffusion of innovation research has been carried out to determine the relative contribution of each of these five types of variables, as shown in Figure 3.13 in green highlight (Lee, Lee & Schumann, 2002; Chang, Lee & Kim, 2006; Zolkepli & Kamarulzaman, 2011), with media adoption.



(Source: Rogers, 2003)

Figure 3.13: Variables Determining the Rate of Adoption of Innovations

Hence, this research concentrates on all five innovation characteristics, as proposed by Rogers (2003), which are presumed to explain the adoption rate in which the evaluation of the innovation characteristics is derived from the individuals' personal experiences and perceptions towards social media. This study will also examine whether relative advantage, compatibility, observability, complexity and trialability influence the adoption of social media by integrating these innovation characteristics with the media needs driver, which is discussed in the following section.

PART III: MEDIA NEEDS DRIVE ADOPTION

3.9 Consumer Motives on Media Usage

As understood from Part I, in order for consumers to accomplish the acquired needs, the psychological aspects of the needs should be considered. The main task in finding out what motivates consumers towards social media adoption is to identify the psychological dimensions.

In reviewing the dimension of psychological needs that predict consumer social media adoption, previous research has mostly applied UGT to examine consumer needs in respect of media. The closest research that can be used to understand the motivation towards social media adoption is by Flaherty, Pearce and Rubin (1998), Papacharissi and Rubin (2000), Charney and Greenberg (2002), Hardy and Scheufele (2005), and Rashtchy et al., (2007) who studied consumer use of the Internet. It is noted that consumers use the Internet to fulfil interpersonal needs. This includes affection, which covers needs traditionally gratified by media, such as entertainment and newer media needs, such as socialising. From this, it is deduced that there are different types of need that drive a variety of motives towards different types of technology media.

Different types of media have different potential for motivating consumer involvement (Greenwald & Levitt, 1984). The unique attributes of the media enhance and alleviate the effects on consumer involvement. Prior research also suggested the effectiveness of combining interpersonal and media motives in examining media usage, especially in the uses of new media (Rubin, 1998; Papacharissi & Rubin, 2000; Sun et al., 2008; Zolkepli & Kamarulzaman, 2011). ***Thus, media theories that are used to ground the framework***

development for this research are discussed herein and then elaborated upon in greater detail. The following section reviews the media theory of involvement, system dependency and uses and gratifications.

3.9.1 Media Involvement and System Dependency

In media research, involvement pertains to the relationship of media users with messages conveyed by media or with media (Levy & Windahl, 1985), media personae (Rubin & Perse, 1987a) or other media uses (Rubin & Step, 1997). Media involvement is conceptualised as:

> *'Cognitive, affective and behavioural participation during and because of exposure'(Rubin & Perse, 1987a, p247)*

The concept of media involvement (MI) places the locus of involvement within the individual and stresses the interaction between the audience and external factors, such as messages or media. In order to understand media involvement, it is necessary to first understand the audience, which, in this context of research, refers to the consumer. Consumer involvement with media is vital because it explains the role of communication interaction (Rubin, 1998). It is evident that the connection between activity and involvement will increase MI (Sun et al., 2008). Consumer connection with media is mostly manifested in media motives – also called utility – selectivity and involvement with messages.

To create media use and effects, Levy and Windahl (1984) identify two dimensions of media activity – motives and involvement. Media activity that is selected before the media exposure refers to motives for using the media while the media activity selected

during the media exposure refers to psychological engagement (i.e. involvement). Because these types of activity operate along a temporal dimension, such as the relationship between motives, involvement and uses, the order of MI is illustrated in Figure 3.14.

(Source: Levy & Windahl, 1984)

Figure 3.14: Media Activity Level

Media System Dependency (MSD) is a relation that reflects the individual's goals when they are conditioned upon the media. MSD refers to the tendency to rely heavily on a particular communication medium for the fulfilment of needs and wants. It is associated with the pattern of media use and has frequently been operationalised as the extent to which an individual would feel empty if a particular medium is not available (Ball-Rokeach & Defleur, 1976; Rubin, 1983; Lindlof, 1986; Rubin & Windahl, 1986; Greenberg & Salwen, 2009).

MSD implies the absence of functional alternatives (Rosengren & Windahl, 1972). It is affected by social and psychological attributes, as these attributes influence the availability of the communication alternatives. Previous research has indicated, for instance, a connection between low self-reliance and greater dependency on the television (Rubin & Rubin, 1982). In general, dependency on a particular medium augments the effects that a particular medium could produce (Miller & Reese, 1982; Rubin, 1994).

Additional research in this area that connects MSD to other media content and phenomena, including virtual gaming, and public decline of civic engagement, explain how reliance on a particular medium leads to certain cognitive, attitudinal or behavioural consequences (Fulk, 1993; Chang, Lee & Kim, 2006; Petric, 2006; Paine, 2009; Shin & Shin, 2011). The MSD proposes a model for understanding the uses and effects of media, by centring on media consumption (Rubin & Windahl, 1986).

However, MSD is not goal-oriented because the system dependency stresses the relations whereas goals reflect the attributes (Ball-Rokeach, 1998). MSD addresses the question concerning what people do with media, in that it focuses on the individual's access to media to achieve the goal (Grant, Guthrie & Ball-Rokeach, 1991). Ball-Rokeach (1998) contend that the formation of MSD is determined by structural factors and the social psychological factors of individuals. Some of the early works that use MSD within the sociological framework have somewhat underestimated the role of social psychology, such as individual needs in the formation of media dependency.

Ball-Rokeach (1998) describes MSD as a theory that explains media problems. In other words, it explains that when an individual is motivated to use a medium it will also influence the intensity of the user-medium dependency relationship. Ball-Rokeach (1998) adds that individual media dependency relationships vary along three conceptual dimensions, that is, (i) how the individual perceives the media to help fulfil goals and needs, (ii) goal scope, which refers to the goal of understanding one's self and social needs, and (iii) referent scope, which refers to the number of functions an individual adopts when using the media.

Between the MI and MSD theory, the relation is responsive to the individuals' motivational influence which led Sun et al. (2008) to assert the need to study the adoption and motivation for using the UGT. This can help clarify the psychological and sociological roles in relation to the media attribute. It is deduced that UGT focuses in depth on the dimensions that individuals develop towards media unlike the explained MI and MSD theories (Grant et al., 1991). ***The MI and MSD theory have somehow underestimated the role of psychological factors, such as individual needs, consequently, the following section will look at the UGT. This will explain the different aspects of individual motives towards media usage.***

3.9.2 Media Uses and Gratifications

The Media Theory of Uses and Gratifications (UGT) examines the nature of user involvement and the gratification that the consumer receives from adopting the media. It emphasizes the psychological motives and social traits that influence the consumer behaviour and attitude towards the media (Papacharissi, 2009).

Specifically, UGT studies the way people use media. It investigates the pleasure people look for from media and the attitudes that they develop towards the medium and its contents (Stafford, Stafford & Schkade, 2004). The objectives of UGT are to:

i. Explain the psychological needs that shape why people use the media and what motivates them to engage in certain media-use behaviours for gratification
ii. Explain how individuals use mass communications to gratify their needs
iii. Identify the consequences of media use

The key concept of UGT is that the choice consumers make when consuming media motivates their desire to gratify a range of needs. The assumptions of this theory have been put forward by McQuail (1987) as below:

i. Media selection and use is purposive and motivated and people take initiative in selecting and using communication vehicles to satisfy felt needs and desires
ii. The audience is active
iii. The audience makes motivated choices based on previous experience with the media
iv. Media use is only one-way amongst others to satisfy the needs experienced in everyday life

The origins of UGT can be traced back to Lasswell's (1948) model that questions who uses which media, and how and what effect the media has on the users. Lasswell (1948) identifies three primary functions of mass media: (i) surveillance of the environment, (ii) correlation of events, and (iii) transmission of social heritage, which serve as the basis for formulating media needs and expectations within the UGT.

Early UGT examines the reasons why people listen to the radio formats, including quiz shows and soap operas (Herzog, 1944; Lazarsfeld & Stanton, 1944, 1949; Warner & Henry, 1948). These studies point out that media helps fulfil several everyday needs. This finding leads to an examination of media processes and effects from a media functional perspective (Katz et al., 1974).

Similar studies followed in the late 40s and 50s, in response to the appearance of television as a mass medium that looks into media and politics (Blumler & McQuail,

1969). The volume and state of UGT research at that point was organised and reviewed by Katz et al. (1974). They define theoretical foundation of UGT as follows:

> *The social and psychological origins of needs which generate expectations of the mass media or other sources, which lead to differential patterns of media exposure (or engagement in other activities), resulting in need gratifications and other consequences, perhaps mostly unintended ones (Katz et al., 1974, p20)*

According to the theory, basic human needs that interact with individual characteristics refer to (i) psychological setup, social position, and life history and (ii) society, which includes media structure that produces perceived problems and perceived solutions to the user. The problems and expected solutions are modelled into motives for communication, and lead to media and other behaviour.

Such work places media uses and consequences within the larger context of individual everyday social habits and routines. In addition, it suggests ways in which motivations and traits lead to the consumption of the media over other avenues, for the fulfilment of individual needs (Rubin & Windahl, 1986).

Apropos to that, Rubin & Rubin (2001) clarify the interrelationships among societal systems and media audiences. It is suggested that people who possess a wide variety of media access and are willing to use it should be less dependent on a particular medium. This relationship indicates an interface between personal and mediated communication. In agreement with this, Palmgreen (1984) summarises UGT into six main areas as follows:

i. Gratifications and media consumption
ii. Social and psychological origins of gratifications
iii. Gratifications and media effects

iv. Gratifications sought and obtained

v. Expectancy-value approaches to uses and gratifications

vi. Audience activity

Having to understand the theoretical and conceptual adjustments from time to time, Rubin (1994) proposes contemporary UGT that is grounded based on the following five assumptions:

i. Communication behaviour, including media selection and use, is goal-directed, purposive and motivated

ii. People take the initiative in selecting and using communication vehicles to satisfy felt needs or desires

iii. A host of social and psychological factors mediate people's communication behaviour

iv. Media compete with other forms of communication (i.e. functional alternatives) for selection, attention and use to gratify their needs or wants; and

v. People are typically more influential than the media in the relationship, but not always

UGT also outlines ways of classifying needs and gratifications, for instance, Schramm, Lyle and Parker (1961) classify media needs as immediate and deferred gratifications while Weiss (1971) classify them as informational-educational and fantasist-escapist. Notwithstanding the above, McQuail, Blumler and Brown (1972) suggest the following categories, which have been noted as one of the important findings for the development of UGT.

i. Diversion – escape from routine and problems, emotional release

ii. Personal Relationship – social utility of information in conversations and/or substitute media for companionship
iii. Personal Identity/Individual Psychology – value reinforcement or reassurance, self-understanding and reality exploration
iv. Surveillance – information about things that affect one or help one do or accomplish something

Notwithstanding the above-mentioned, the categorisation of UGT by Katz, Haas and Gurevitch (1973) is the one closest to this research and is adapted due to the fact that Katz et al. (1973) use UGT to analyse mass media adoption in detail, which covers five important media – television, radio, magazines, books and cinema. Kat et al. in their comprehensive research listed 35 needs that were drawn based on large speculative literature on the social and psychological functions of the mass media, which has been categorised as below:

i. Cognitive Needs – involve acquiring information, knowledge and understanding
ii. Affective Needs – involve emotional, pleasurable and aesthetic experience
iii. Personal Integrative Needs – involve strengthening credibility, confidence, stability and status
iv. Social Integrative Needs – involve strengthening contacts with family, friends and the world
v. Tension Release Needs – involve escape and diversion

All of these categories have been employed in much research to understand the uses and consequences of various media. The strength of UGT in Katz et al. (1973) lies in its applicability to a variety of media contexts. It shares a frame of analysis that focuses on motives, social and psychological antecedents, and cognitive, attitudinal or behavioural

outcomes. UGT has managed to cover the most diverse and prolific research pertaining to media and consumers.

It is noted that previous research that has employed UGT focuses on a particular medium or compares the uses and gratifications across media. They examine media motives that combine media attributes and relevant social and psychological antecedents to look at consequences or effects associated with the medium consumption, for instance, soap opera (Alexander, 1985; Rubin, 1985; Perse, 1986; Babrow, 1987), news television programmes (Palmgreen, Wenner & Rayburn, 1980; Rubin, 1981; Rubin & Perse, 1987b), VCR or Video Cassette Recorder (Levy, 1981, 1983, 1987; Rubin & Bantz, 1989), talk show and radio show (Turow, 1974; Surlin, 1986; Armstrong & Rubin, 1989), watching cable television (Jeffres, 1978; Becker, Dunwoody & Rafaell, 1983), channel surfing (Walker & Bellamy, 1991; Ferguson, 1992), magazine and tabloid reading (Salwen & Anderson, 1984; Payne, Severn & Dozier, 1988; Atwater, 2009), watching reality television (Papacharissi & Mendelson, 2007) and using the Internet (Morris & Ogan, 1996; Leung, 2001; Charney & Greenberg, 2002; Papacharissi, 2002a, 2002b; Stafford et al., 2004; Ko et al., 2005; Lo, Li, Shih & Yang, 2005).

From the wide usage of UGT, it is noted that media needs towards using media are developed differently by consumers due to the media characteristic itself. That is why uses and gratifications of each media differs (refer to Table 3.3 for details of media needs). As consumers attach and extend their uses of media, they also develop their own set of needs towards these media. These demonstrate the utility of uses and gratifications that is presumed by this research to help identify the reasons for consumers to gain from media usage.

3.10 Empirical Studies on Consumer Media Needs

From the presented theories in Part III, it is understood that consumer motives for using media has explored the dominant trends that mostly focus on contemporary social phenomena (Haridakis & Hanson, 2009). As discussed, motives influence consumer action for the fulfilment of needs, wants and behaviour towards media. Using UGT, most media research investigates motives as a way to understand consumer media consumption.

Rubin (1983) identifies nine recurring consumer needs towards television adoption: (i) relaxation, (ii) companionship, (iii) entertainment, (iv) social interaction, (v) information, (vi) habit, (vii) pastime, (viii) arousal, and (ix) escape. Palmgreen et al. (1980) add (i) para-social interaction and (ii) surveillance motive for news watching while Bantz (1982) introduced voyeurism for television programmes.

Moreover, Rubin, Perse & Barbato (1988) draw upon previous research and verify six needs consumer develop when engaging with interpersonal communication media: (i) pleasure, (ii) affection, (iii) inclusion, (iv) escape, (v) relaxation, and (vi) control. Affection, inclusion and control come from interpersonal-oriented needs, whereas pleasure, relaxation and escape are developed within UGT itself and are used to study media usage. Recently, most contemporary UGT research employs a combination of interpersonal and media motives to capture the unique abilities of the medium.

In addition, the psychological construct of unwilling to communicate represents a tendency to avoid oral communication, which has been notified as a motive for talk radio and Internet usage (Burgoon, 1976; Papacharissi & Rubin, 2000). Also, Internet

users who find face-to-face communication less rewarding are more likely to use the Internet for social communication (Papacharissi & Rubin, 2000; Papacharissi, 2002a, 2002b).

Other dimensions that are used to link to media consumption include loneliness, anxiety, creativity and sensation seeking. It is found that mood and content preference are strong predictors of selective viewing and thinking (Perse & Rubin, 1990; Conway & Rubin, 1991; Hawkins, Pingree, Hithchon, Gorham, Kannaovakun, Giligan & Schmidt, 2001).

Based on UGT, Rubin (1994) distinguishes between instrumental and ritualised orientations towards the media, which are argued to lead to different levels of audience activity and involvement with the media. Ritualised orientation is diversionary in nature, and involves habitual use of a medium to pass the time, and relates to greater use of the medium. Instrumental orientation is utilitarian and selective in nature that connects to purposive and informational uses of the medium, suggesting greater involvement and intentionality. These two orientations lead to different types of cognitive, attitudinal and behavioural effects associated with media use.

Considerable attention has also been devoted to the informational and social uses of newer media. In Perse and Courtright's (1993) study of computer-mediated communication, they identify four types of need: (i) relaxation, (ii) entertainment, (iii) self-awareness, and (iv) excitement. Subsequently, Perse and Dunn (1998) explore the use of computer connectivity to communicate with other users through information services and find six needs: (i) learning, (ii) entertainment, (iii) social interaction, (iv) escapism, (v) passing time, and (vi) out of habit.

Hardy and Scheufele (2005) combined research on computer-mediated communication and UGT to understand how exposure to hard news, combined with interpersonal communication could lead to greater participation in public affairs. UGT assumptions are also employed to understand how consumers select and what they expect of online versus traditional news media (De Waal, Schonebach & Lauf, 2006; Schoenbach, De Waal & Lauf, 2005).

Conversely, Dimmick et al. (2004) detect an overlap between the niches of offline and online media, and a pronounced tendency for the Internet to displace traditional news sources, like television and print media. Equally, Kaye and Johnson (2002) identify guidance, surveillance, entertainment, and social utility as the four primary motivations of political uses of the Web that are connected to the amount of use, trust in government, feelings of efficacy, political interest, and likelihood to vote. Also, Chyi (2005) employs the UGT framework to understand user willingness to pay for online news content.

In addition to online media, social connectivity enabled by newer media via the online platform has drawn attention from UGT researchers, through which Perse and Ferguson (2000) find learning to be the most salient motive for surfing followed by information and entertainment. Papacharissi and Rubin (2000) examine ritualised and instrumental uses of the Internet, and find the medium to be a functional alternative for people with diminished mobility, economic security and social interaction offline, and also for people who find face-to-face communication less rewarding. In another study of chronic loneliness and online behaviour, Leung (2001) find connections between instrumental uses of the media for the non-lonely, but no support for ritualised uses and the lonely group. Table 3.3 summarises some of the empirical findings pertaining to media needs.

Table 3.3: Empirical Findings of Studies Pertaining to Media Needs

Sources	*Medium*	*Media Needs*
McQuail et al. (1972)	Television Quiz Programme	Diversion, Personal Identity Personal Relationships, Educational, Excitement
Palmgreen et al. (1980)	Television	Entertainment, Pastime, Escape, Information, Companionship, Relaxation, Social Interaction, Habit, Arousal, Para-Social Interaction, Surveillance
Rubin (1981)	Television	Entertainment, Arousal, Habit, Pastime, Escape, Companionship, Information Seeking
Bantz (1982)	Television	Entertainment, Pastime, Escape, Information, Companionship, Relaxation, Social Interaction, Habit, Arousal, Voyeurism
Rubin (1983)	Television	Entertainment, Pastime, Escape, Information, Companionship, Relaxation, Social Interaction, Habit, Arousal
Payne et al. (1988)	Magazine	Diversion, Surveillance, Interaction
Lin (1993)	Television	Entertainment, Informational Guidance, Interpersonal Communication, Diversion
Perse & Courtright (1993)	Computer-Mediated Communication	Entertainment, Relaxation, Self-Awareness, Excitement
Perse & Dunn (1998)	Computer	Entertainment, Learning, Social Interaction, Escapism, Passing Time, Out of Habit
Kaye (1998)	Internet	Entertainment, Pastime, Escape, Social Interaction, Information, Website Preference
Parker & Plank (2000)	Internet as Information Source	Companionship, Social Relationship, Surveillance, Excitement, Relaxation, Escape
Papacharissi & Rubin (2000)	Internet	Entertainment, Pastime, Interpersonal Utility, Information Seeking, Convenience
Ferguson & Perse (2000)	TV Related Web Surfing	Entertainment, Pastime, Relaxation, Social Information
Leung (2001)	Instant Messaging	Entertainment, Affection, Relaxation, Fashion Inclusion, Sociability, Escape
Stafford et al. (2004)	Internet	Entertainment, Search Factor, Cognitive Factor, News, Unique Factors
Charney & Greenberg (2002)	Internet	Division Entertainment, Peer Identity, Good Feelings, Coolness, Keep Informed, Communication, Sights and Sounds, Career

Sources	*Medium*	*Media Needs*
Papacharissi (2002a)	Personal Homepage	Entertainment, Pastime, Information, Self-Expression, Professional Advancement, Communication with Friends and Family
Kaye & Johnson (2002)	Political Uses of Website	Entertainment, Guidance, Surveillance, Social Utility
Ko et al. (2005)	Internet	Entertainment, Social Interaction, Information, Convenience
Diddi & La Rose (2006)	Internet News	Entertainment, Escapism, Habit, Pastime, Surveillance, News Quizzes
Chang et al. (2006)	Online Games	Companionship, Action, Substitution for Friends, Passing Time, Popularity
Haridakis & Hanson (2009)	Video-Sharing Website	Convenient, Entertainment, Convenient Information, Co-Viewing, Social Interaction
Quan-Haase & Young (2010)	Facebook – Instant Messaging	Passing Time, Sociability, Social Information, Fun, Relationship Maintenance, Relationship Development
Lee & Cho (2011)	Social Media via Mobile Broadband	Entertainment, Interactivity, Mobility, Passing Time, Substitute, Companionship, Solitude, Popularity
Zolkepli & Kamarulzaman (2011)	Social Media	Personal Integrative Needs, Social Integrative Needs, Tension Release Needs

Based on various studies that use UGT, it can be concluded that satisfaction of these needs determines the attitude towards media that the consumer chooses. This attitude, in turn, leads to the individual's choice for the type of media and its content to gratify the needs that they have. ***This attitude formation process can be mediated by other variables affecting the final behavioural outcome, and repeat or continuance usage of media or its content. Notwithstanding the above, this research setting benchmarks the Internet as a point of reference that helps to identify social media need satisfaction and gratification.***

PART IV: SOCIAL MEDIA ADOPTION

3.11 Merging Media and Technology as Adoption Drivers

Social media is the latest user-led innovation that emerges from the Internet and Web 2.0 technologies as explained in Chapter Two. Research into social media usage effects, consequences, motivations, influences and development trajectories is still embryonic (Hutton & Fosdick, 2011; Durukan et al., 2012; Kim & Ko, 2012). Currently, social media proliferation and unforeseen developments far outstrip the academic multi-disciplinary research abilities and capacity to explain and predict the rapid growth, popularity and diffusion of this medium across society. It is possible to classify the consumption related behaviour of social media as influencing and being influenced by others. These behaviours may take place before, after and in the occurrence of consumption, and, hence, can be positive or negative in direction (Durukan et al., 2012).

For classifying these situations, it needs to be understood that the social media site is a communication site that works as an information source for the users as well as for social connections. Thus, the influence level of social media is closely related to the similarity between the individuals and the attitude towards social media itself (Mangold & Faulds, 2009).

In explaining this, the review of the literature reveals the answer concerning the evolution of social media and its special features that lead to the rapid adoption of social media by consumers. It is realised that the adoption of social media is highly related to its innovation uniqueness as a media that is available online at anytime, which allows socializing, conversation and interaction across the globe (Drury, 2008; Raacke &

Bonds-Raacke, 2008; Valenzuela et al., 2009; Park et al., 2009; Chung & Austria, 2010; Parra-López et al., 2011; Smock et al., 2011) and also the technology readiness that increases the speed of technology acceptance (Ho & Wu, 2011; Parasuraman, 2000; Yousafzai & Yani-De-Soriano, 2012).

On the one hand, it is noted that the earlier research on social media focuses on understanding consumer participation in virtual communities, which is found to revolve around a common interest and sharing conventions, language, rituals and norms of interaction that make social media distinct from others (Bagozzi & Dholakia, 2002; Foster, Francescucci & West, 2010). However, as technology evolves and develops, new capabilities emerge, and this creates different types of social media connections.

While, on the other hand, some of the emerging social media studies focus on social media type; for instance, Facebook, YouTube and Twitter. Quan-Haase and Young (2010) examine the gratification obtained from Facebook Instant Messaging and determine that passing time, sociability and social information are the main factors of Facebook Instant Messaging usage. Thus, it is concluded that the motive to use Facebook Instant Messaging is for fun, which leads to other social activities in social networks and gears the consumer towards relationship maintenance and development.

However, a recent study by Lee and Cho (2011), which examines the factors that influence the use of social media in a mobile broadband environment, finds (i) entertainment, (ii) interactivity, (iii) mobility, (iv) passing time, (v) substitute, (vi) companionship, (vii) solitude, and (viii) popularity as the influential factors in explaining the formation of an attitude towards the use of Facebook and Twitter.

Also, Hutton and Fosdick (2011) in their study on the globalisation of social media in the context of consumer relationship with brands determine that consumers engage socially online because of the need to (i) promote themselves, (ii) share new experiences with others and (iii) simply have fun or waste time. Thereby, it is presumed that consumer motivations vary depending on the social media platform.

Furthermore, Raacke and Bonds-Raacke (2008), who apply UGT to explore social networking websites, find that media gratifications of keeping in touch with friends are met by social media users. Hence, they have notified two similar reasons: (i) to stay in touch with friends and (ii) to meet new people.

It is noted that the evolving specificity on conceptualising social networking motivations for benefits from technologies are somehow moving in a similar direction. However, empirical studies that can warrant generalization from all of the presented motivations by previous studies to understand social media adoption as a whole entity are lacking (Best & Krueger, 2006; Foster et al., 2010; Valenzuela et al., 2009; Wasko & Faraj, 2005).

Moreover, the study of Dholakia et al. (2004), on virtual communities, explain that participants in the network-based communities are driven by the need to either obtain information from or provide information to others, whereas for small groups networks, the drivers for participation are the desire for social connectivity and social enhancement. It is acknowledged that there is more than one form of network-based community and that each may be associated with a different attitude and behaviour. It is noteworthy that despite the changes in technological capabilities, social connection and information sharing appear to promote motivation for participation in social networks.

In this respect, consumer change of attitude has led to a rise in social media adoption at an unexpected level due to two general suppositions, that is, attitude towards social media and technology innovation of social media. Therefore, Part IV elaborates upon how the elements in Parts I, II and III merge and extends them to provide further understanding concerning the development of the research model explained in Chapter Four. It also elaborates on how consumers behave towards adopting stimuli, a point in the research on social media.

3.12 Extension of the Theoretical Perspective

In studies relating to an innovation's diffusion within society, previous research proposes a number of models that aim to predict the rate of adoption and an individual's adoption decision (refer to Part II). As noted in Rogers (2003), he suggests that when a concept is perceived as new, individuals utilise communication tactics within social systems in order to arrive at a decision point of either adoption or rejection of the innovation. In the case of social media, the adoption is positive in that the rate of adoption is in accordance with the suggested S-curve (Mahajan, Muller & Srivastava, 1990; Black, Lockett, Winklhofer & Ennew, 2001; Chang et al., 2006) as depicted in Figure 2.2. Roach (2009) suggests that DIT is a suitable theory to be applied to study adoption because it offers mutually exclusive and exhaustive categories allowing results to be compared and is a suitable framework for replicating and generalising innovation adoption action across studies.

In addition, it is also noted from the literature that the research on consumer media needs has expanded dramatically. For a set of consumer media needs to be developed with regards to innovation-based media, understanding the driver that motivates the

usage needs to be studied from all aspects including attitude formation towards technology innovation itself. In explaining the consumer drive to use social media, the evolution of social media and its innovation factor has left this area of research confronted by a multitude of choice among the many developed models in technology-based media studies. The review of the literature shows that in developing constructs, one should pick and choose among the models or choose the favoured model close to the area of research (Al-Amoudi, Heald & Rayburn, 1993; Dahlstrom, Nygaard & Crosno, 2008; Greenberg & Salwen, 2009).

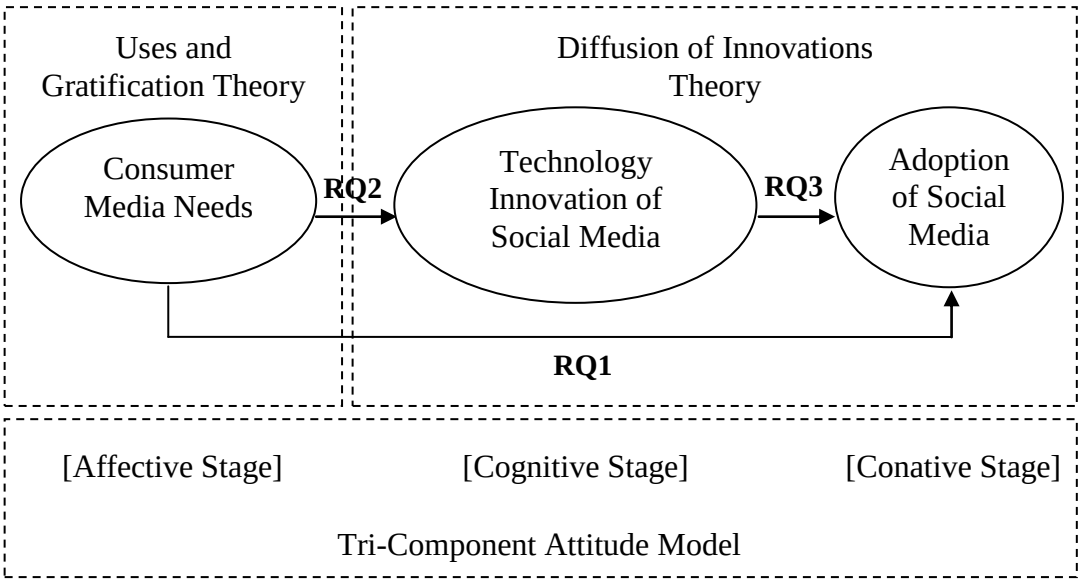


Figure 3.15: Research Theoretical Foundations

Figure 3.15 presents the theoretical foundation explaining individual motivations to use social media that forms the basis of this research. Despite seeing two dominant theories and one model that shape the development of the research framework, one needs to note that these are the major theories and model used to identify the detailed needs consumers present towards social media adoption. The other important theories on behaviour development and attitude formation, as reviewed in Part I, play a role in

explaining how these models work from one point to another with regards to the basic principles of behaviour development and attitude formation, as deduced by the earlier research presented in Part I. Overall, the review of the literature in the area of the consumer, media and technology has resulted in the identification of key competing theoretical foundations as the basis of the development of this model. There is a need for model synthesis in order to progress towards a unified view of consumer media needs towards social media.

Within this area of inquiry, there have been several streams of research involved, as presented throughout Parts I, II and III, which, at the end goes down to the goal of this research, which is to understand social media usage as the dependent variable, the role of innovation as the mediator and motivation as the predictor. The subsequent section looks at the gap identified in the above-mentioned literature review.

3.13 Gaps in the Area of Consumer, Media and Technology Innovation

3.13.1 Research Gaps in Consumer Media Needs

The change in the media usage pattern reveals that the traditional model of media communication is no longer adequate for understanding media adoption (Kaye, 1998; Charney & Greenberg, 2002; Quan-Haase & Young, 2010). To reach an understanding on this, extending previous media needs by taking into account the media characteristics gives a more accurate understanding of the factors that lead to the rapid speed of media adoption (Perry, 2002). Although media naturally shares some similarities in its characteristics, the consumer needs towards using and gratification through the media might differ depending on how the media is perceived to be useful and meet such

gratifications (Novak, Hoffman & Yung, 2000; Preece, 2001; Mersey et al., 2010; Xiang & Gretzel, 2010).

Hence, to replicate the previous media model, as explained in Part III in the social media context, is discouraged (Lin, 1999; Kaye, 2004; Stafford et al., 2004). Social media, as explained in Chapter Two, is asserted to grant a certain level of entertainment, interaction, enjoyment and socialization (Rashtchy et al., 2007). The media experience that consumers gain from using media changes their behaviour and usage pattern. Studies devoted to this area do not really focus on the consumer media needs, but rather on the formation of social network or social networking usage (Dholakia et al., 2004; Valenzuela et al., 2009; Shin & Shin, 2011). ***Thus, this research fills the knowledge gap by developing a social media model that concentrates on consumer psychological needs based on three major categories: (i) personal needs, (ii) social needs, and (iii) tension release needs, which is presumed to encourage the speed of adoption.***

3.13.2 Research Gaps in Attitude Studies

It is noted that attitude is a human predisposition towards an object/stimuli (Fishbein & Ajzen, 1975). Another concept that is closely related to attitude is beliefs (Eagly & Chaiken, 1993). Attitude is important in areas that people are concerned about. Attitude has three components: (i) affective (the liking or feeling about an object), (ii) cognitive (beliefs about an object), and (iii) conative (actions towards the object) (Rosenberg, 1960). Essentially, an attitude is a summary of the evaluation of the object towards which the attitude is held. In the area of media needs, these three stages of attitude components are rarely investigated. Here, all the needs are summed up together as a need towards the media by neglecting the category of needs that it falls under for the

benefit of consumer behaviour research (Breckler, 1984; Crites et al., 1994; van den Berg et al., 2006; Zhao et al., 2011). Categorising needs based on these three attitude component models is important in order to understand the outcome of the findings, which, later, can be used to contribute to the typology of media needs based on these three components.

Therefore, realising that these three components of attitude have not attracted much attention in the study of media needs, this research will fill the gap by investigating the model based on these three needs.

3.13.3 Research Gaps in Innovation Studies

DIT by Rogers (2003) is a an established theoretical framework that explains how technological innovations spread across individuals within a social system. Research on DIT is at a relatively mature stage (Sultan, Farley, & Lehmann, 1990; Rogers, 2003). However, most innovation studies that utilise DIT focus on broad innovation and adoption perspectives rather than going narrowly into consumer adoption of technological innovations (Gauvin & Sinha, 1993; Frambach, Barkema, Nooteboom & Wedel, 1998). In addition, much of the research lacks insight in studying the individual consumer's decision to adopt innovation-based media, and, hence, is often constrained for accessing in terms of its empirical findings (Lee et al., 2002; Lee, Lee & Eastwood, 2003; Zolkepli & Kamarulzaman, 2011).

Past research on consumer adoption of innovations has been identified as isolating communication factors that can be used to predict adoption by the individual (Lee et al., 2002; Kitchen & Panopoulos, 2010). Furthermore, the diffusion literature and previous

studies of consumer use of self-service technology suggest that consumer perceptions of innovation characteristics (Strutton, Lumpkin & Vitell, 1994; Rogers, 2003) and perceived benefits of technology (Davis, Bagozzi & Warshaw, 1989; Lee et al., 2002) are potential determinants of consumer willingness to adopt innovation-based media.

Therefore, this research will fill the gap by investigating the factors affecting consumer adoption of social media, which, in this respect, refers to the effects of innovation characteristics and consumer needs towards the adoption of technological innovation.

3.14 Chapter Summary

Research on social media and the theory pertaining to consumer attitudes towards it has slowly flourished in recent years. This chapter discusses the role of grounded theory and its supporting facts and the advantage of being able to make predictions through the research gaps.

It also reveals several gaps in the literature that warrant the need for a comprehensive study concerning the consumer, social media and the underlying technology innovation. Hence, the reference event for this research is social media. In order to reach to the reference event, a set of behavioural formation and responses towards social media needs identification. This behavioural conducts are the consequence for which the antecedents of behavioural formation are determined to develop the research framework. This involves inferring behavioural traits, individual needs and perceptions or the state of consciousness of a behavioural formation.

Therefore, the literature review on the derivation of behaviour formation is first presented as a theoretical foundation to support the understanding of consumer behaviour in today's living. In modern day society, finding the solution to what makes consumers adopt social media at a very fast speed is crucial for designing marketing strategy as well as for enhancing the body of knowledge on the current consumer behaviour. In this respect, the theories that are applied as a root for the development of the research model are: (i) TRA, (ii) TPB, (iii) TAM, (iv) UTAUT, (v) BRT, (vi) TCAM, (vii) Maslow's Hierarchy of Needs, (viii) Motivation Process Model and (ix) MGB. Via the understanding of these theories the dominant theories that are used to design the research model are (i) DIT, (ii) UGT, and (iii) TCAM.

These theories guide the development and design of the research model for the following reasons. Firstly, the theories have been widely applied and referred to in studies relating to attitude, innovation and media usage. Hence, it provides a strong foundation for the research as consumer behavioural theory in the context of social media. Secondly, despite being extensively used, there is still room for further improvement, extension and integration with other emerging constructs (i.e. media needs construct and social media technology innovation construct) in the effort to understand the antecedents of the adoption of social media. Thirdly, these theories have produced significant results that show high reliability and validity in the traditional research setting (i.e. offline setting). It is interesting to test the applicability of the theories in a new setting in that these theories might produce unexpected results in the social media context.

Therefore, based on the reviewed theories and models, the following chapter will further explain the research framework, which is developed based on the review of the literature presented in this chapter. Operationalisation of measurement and specific hypotheses are also formulated in the next chapter for testing using the proposed research framework.

Chapter Four
CONCEPTUAL FRAMEWORK

4.1 Introduction

The preceding chapter identified the need to study the antecedents of social media adoption. From the literature review, it appears that there are relatively few studies that examine the relationship between media needs and technology innovation with regards to the speed of adoption. Hence, this study attempts to fill the gap in the literature as well as to respond to suggestions made by previous researchers to explore consumer adoption decisions in the social media context, and to investigate the interrelationships among constructs that might have been overlooked by previous researchers. To achieve these objectives, a conceptual model is developed to explain the antecedents of consumer adoption of social media and the interrelationship.

The first part of this chapter presents a model of consumer and social media based on the literature review, which was elaborated upon in Chapter Two and Chapter Three. The first order constructs are described, which involves (i) Media Needs, (ii) Innovation Characteristics and (iii) Adoption. These are later discussed in the second order constructs in a bit more detail together with their operationalisation. This is followed by the proposed hypotheses and the arguments supporting the hypothesised linkages depicted in the conceptual model. Finally, a discussion and the conclusion of the chapter is offered.

4.2 Model of Consumer and Social Media Needs

To recapitulate on what has been reviewed so far, it is important to note that previous studies have presented various media models to explain media adoption ranging from traditional media to Internet media. These models mostly measure the motivational needs pertaining to the media and investigate the correlation with the needs towards using the media.

With regards to this research, which aims to look at the holistic view of social media adoption, it is important to understand what drives consumers to adopt social media, which, in this respect, the development of the drivers for this research model, are derived based on other types of media adoption studies. Also, the review of the literature focused on the theoretical background concerning how attitude was formed towards social media as well as the elements of innovation characteristics that are predicted to drive the consumer to adopt social media.

Accordingly, this chapter goes into more detail in looking at the number of first-order constructs, where the drivers are further categorised in order to find the definite second order constructs. The second order constructs will help to indicate the specific needs and motivations that consumers develop towards social media and provide deeper understanding of the reason for media specific conduct, and, hence, encourage adoption. It is noted that personal, social and situational motivation stimulates social media adoption and is believed to change accordingly depending on the cruciality of the motives towards social media. The progress of this research is stimulated by integrating the theory paradigm with theory development to help provide a common frame of reference.

In order to explain the social media and consumer needs model, consumer motivation is initiated through the processing of information, followed by an evaluation of the information, the development of an attitude, and ends with behaviour performance (Bagozzi, 1982). Several antecedents are investigated; these come from several prominent theories and models – from the area of consumer behaviour it employs TRA, TPB, TAM, UTAUT, BRT, TCAM, Hierarchy of Needs, Motivation Process Model and MGB, from the technology innovation area it employs DIT, and from the media area it employs UGT. Together, these explain the relationship between the antecedents of social media adoption as proposed by this research, which looks into the perceived consequences of the act, a representation of the effect on the act and the expressions of performing the behaviour associated with the act.

Although the TRA, TPB, TAM, UTAUT, BRT, TCAM, Hierarchy of Needs, Motivation Process Model, MGB, DIT and UGT focus on different determinants to explain consumer behaviour towards a certain act of behaviour (which in this research refers to adoption), these theories share some similarities. Hence, the conclusions that can be made to justify the selection of theoretical foundation, which also recapitulate what has been discussed in the preceding chapters, are as follows:

i. The consumer attitude and motivation theory (TRA, TPB, TAM, UTAUT, BRT, TCAM, Hierarchy of Needs, Motivation Process Model, MGB) assume an attitude-behavioural response relationship, that is, beliefs form an attitude, which, in turn, influence actual behaviour (adoption).
ii. DIT is considered as a cognitive component of an individual's attitude in which the unit of adoption ranges from individuals within a social system to groups and organizations.

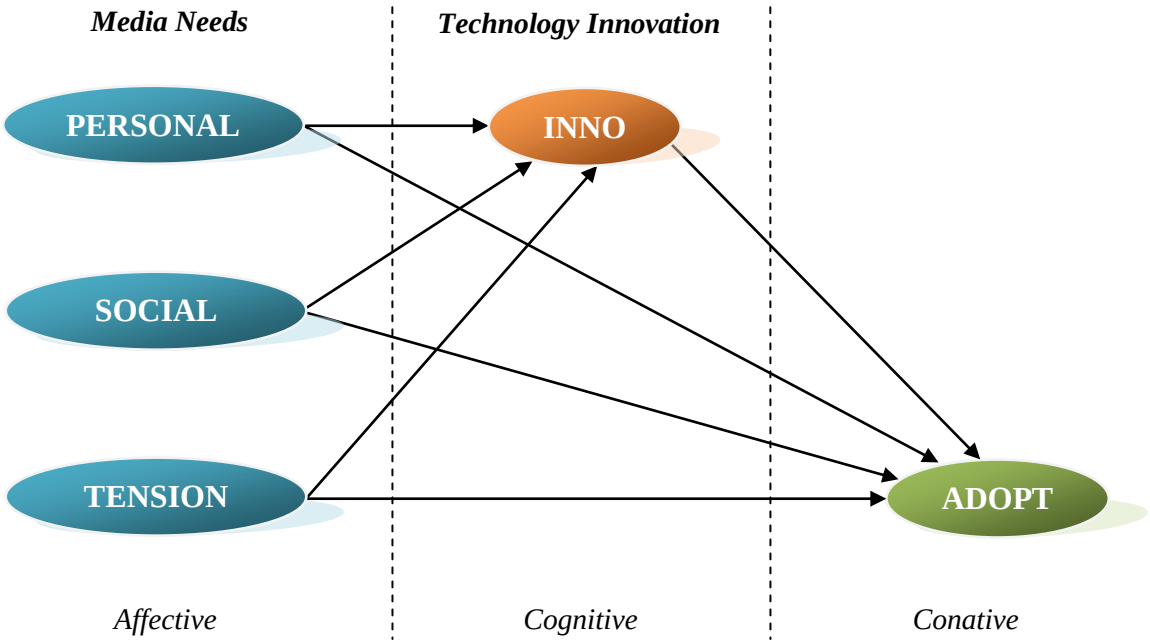
iii. DIT and UGT place similar importance on the beliefs and variables in the decision to adopt social media. The DIT specifies a causal linkage between consciously intended behaviours, attitudes and beliefs, while UGT influence needs to adopt is indirectly affecting beliefs and attitudes. Comparatively, the DIT and UGT have been found to be much simpler, easier to use and able to produce more powerful determinants of social media adoption compared to other theories in their respective disciplines.

Consequently, although the above-mentioned theories and models are used as theoretical foundations in consumer, media and technology adoption studies, little attention has been paid to the study of online media, specifically social media. Hence, this study fills the gap by integrating these theories and constructs in a research model to fit the study of social media adoption. Against this background, this research uses the theoretical foundations of the above-mentioned to develop and test an integrated model predicting the potential antecedents of adoption through which the hypotheses are tested on actual social media users via FGD and an online survey. From a practical standpoint, this enables the researcher to compare the relative influence of each variable on the process and to formulate effective strategies for influencing adoption. Hence, the research model would be able to synthesize both perspectives and develop an integrated model to explain adoption.

Apropos to this, several important departures are discussed hereafter in Section 4.3 onwards. Driven by the determination to answer the research questions and fulfil the aim, the following section discusses the development of the research framework and rudiments of the hypothesized relationships that are subsequently, investigated in Chapter Five.

4.3 Research Framework

Synthesizing the theoretical foundations and pertinent literature review from Chapter Three, the framework for this research is based on the results from the relationship deduced from the review of the literature, observing that different authors use varying approaches to study similar sets of variables. The research framework, as depicted in Figure 4.1, was developed to investigate the antecedents that drive the adoption of social media within the context of the Malaysian consumer.



Key: PERSONAL – *Personal Needs;* SOCIAL – *Social Needs;* TENSION – *Tension Release Needs;* INNO – *Innovation Characteristics;* ADOPT – *Social Media Adoption (Behavioural Response)*

Figure 4.1: Proposed Research Framework

A number of authors including Katz et al. (1972), Kaye (1998), Parker and Plank, (2000), Ruggiero (2000), Rogers (2003), Raacke and Bonds-Raacke (2008), and Weng and Ding (2012) acknowledge this view concerning these relationships. In this research,

the first and second order factors represent the reflective latent variables. A latent variable is a construct that works as a correspondent to the hypothetical construct, which cannot be observed or measured directly (Creswell, 1994; Jarvis, Mackenzie & Podsakoff, 2003; Bryman & Bell, 2007; Hair, Black, Babin & Anderson, 2010).

The measurement items that are used in this research for PERSONAL, SOCIAL, TENSION, INNO and ADOPT are adopted from the identified studies, as depicted in Table 4.1. This table also identifies the sources of the items and the details of the source/reference for the measurement items of this research.

For the latent variable of media needs, the measurement items were derived from the literature review, which focused on the previous media needs of other mediums. It is noted that there is limited standardised operationalisation in many of the studies reviewed concerning these items. For the purpose of this research, which is exploratory in nature, the items used for examining media needs are developed by the previous research and some proposed items derived from the focus group discussion. This research is re-validating using the measurement items, together with the newly developed instrument. A detailed explanation of the model, its constructs and its hypotheses are presented in the following sections.

Table 4.1: First Order and Second Order Measurement Items and Sources

Construct	*Variable*	*Source of Measurement Items*
Personal Needs (PERSONAL)	Trendiness (TRN)	Boyd & Mason (1999), Chryssochoidis & Wong (2000), Rijnsoever & Donders (2009)
	Enjoyment (ENJ)	Lin, Gregor & Ewing (2008)
	Entertainment (ENT)	Ducoffe (1996), Huang (2008), Chen et al. (2002)
	Interactivity (INT)	Wu (1999), McMillan & Hwang (2002), Liu (2003)
Social Needs (SOCIAL)	Social Influence (SIF)	Fishbein & Ajzen (1975), Davis (1989), Ventakesh et al. (2003), Berger et al. (2009)
	Social Interaction (SIN)	Sun et al. (2008), Haridakis & Hanson (2009)
Tension Release Needs (TENSION)	Belongingness (BLG)	Lee & Robbins (1995)
	Companionship (CSHIP)	Parker & Plank (2000), Ridings & Gefen (2004), Song et al. (2004), Foster et al. (2010)
	Playfulness (PLY)	Moon & Kim (2001), Lin et al. (2005), Sledgianowski & Kulviwat (2009)
	Escapism (ESC)	Vincent & Basil (1997), Parker & Plank (2000)
Innovation Characteristics (INNO)	Relative Advantage (RA)	Moore & Benbasat (1991), (Rogers, 1994, 2003), Ittersum & Feinberg (2010)
	Compatibility (COM)	Moore & Benbasat (1991), Rogers (2003), Ittersum & Feinberg (2010)
	Observability (OBS)	Rogers (2003), Ittersum & Feinberg (2010)
	Trialability (TRL)	Moore & Benbasat (1991), Rogers (2003), Ittersum & Feinberg (2010)
	Complexity (COX)	Rogers (1994, 2003), Ittersum & Feinberg (2010)
Adoption (ADOPT)		Srinivasan et al. (2002)

4.3.1 Assess the Media Needs of Social Media

The media needs selected come from a variety of areas – self-growth, self-identity and self-gratification – that explain the role of motivation and values towards developing a set of human attitudes. From hereafter, effort is made to distinguish among the gratifications provided from the needs and the medium attributes, the content, the social

context and the physical contexts with which social media is typically associated, which is also based on the previous literature pertaining to media needs as explained in Part III, Chapter Three.

From all of the needs reviewed, the needs that are highly related to the nature of social media, which is explained in Chapter Two, are used and are classified into three main constructs in accordance with Katz et al. (1973). The classification of the first order media needs constructs are as follows:

i. Personal needs (PERSONAL)
ii. Social needs (SOCIAL)
iii. Tension release needs (TENSION)

It has also been noted from many studies that applied UGT that the media needs were examined independently and loosely without categorising them into types of need. Therefore, this research extends and classifies the media needs for social media into three categories, which will give a clearer understanding concerning the categories of need and can be used in drawing out the marketing strategy.

Furthermore, to support the categorisation of media needs, as suggested by Katz et al. (1973), this research also considers the study of Hagel and Armstrong (1997) on online communities that claims that four types of consumer need satisfy the usage of online communities, which is considered to provide strong support for the classification of needs of this study. These four types of need are (i) interest, (ii) relationship building, (iii) transactions, and (iv) fantasies. Hagel and Armstrong's study is used to justify the selection of these media needs categories because, at some point, online communities share some similarities with social media in general. Accordingly, considering previous

research, and based on Katz et al. (1973), and Hagel and Armstrong (1997), three important categories of need are projected by this study that are predicted to satisfy the adoption of social media The representative measures are presented in the next section.

4.3.1.1 First Order Construct – Personal Needs

Based on Katz et al. (1974), personal needs are operationalised as an *individual's desire to appear credible, confident, and project high self-esteem*. These needs are closely related to an individual's value system. It is presumed that PERSONAL has four measured constructs: (i) Trendiness (TRN), (ii) Enjoyment (ENJ), (iii) Entertainment (ENT), and (iv) Interactivity (INT). The order of the first and second order constructs is illustrated in Figure 4.2.

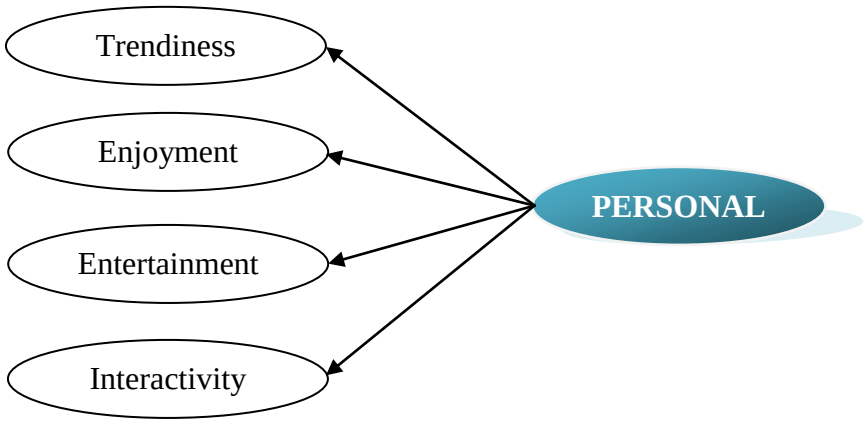


Figure 4.2: First and Second Order Constructs for Personal Needs

Second Order Construct – Trendiness (TRN)

Trendiness is operationalised as *the extent to which an individual perceives themself to be involved in the latest (technological) trends* (Boyd & Mason, 1999; Chryssochoidis & Wong, 2000; Van Rijnsoever & Donders, 2009). In contrast to innovativeness,

trendiness can be considered as part of a lifestyle. The consumer is presumed to purchase new technologies to enhance social identity (Leung, 1998). Chang, Lee, and Kim (2006) also found that perceived popularity or trendiness is a significant factor to explain online game adoption. Trendiness is expected to have a positive influence on the technology innovations and adoption (Boyd & Mason, 1999; Chryssochoidis & Wong, 2000; Rogers, 2003). Hence, this research hypothesises that TRN has a positive influence on INNO and ADOPT.

Second Order Construct – Enjoyment (ENJ)

Enjoyment is operationalised *as happiness, pleasure and flow towards using the medium* (Lin et al., 2008). Consumers that experience enjoyment show several distinct characteristics with those that do not experience it, for instance, enjoyment has been indicated as a contributor to educational outcomes (Goetz, Hall, Frenzel & Pekrun, 2006), motivation to engage in physical activities (Motl, Berger & Leuschen, 2000) and is theorized as having a stabilizing influence on societal structures (Sato, 2006).

Nov et al. (2010) propose that enjoyment is an intrinsic motivation to encourage online community users to share photos within their online community. Nov et al. found that the Internet satisfies basic information needs and provides enjoyment through interaction with others, such as discussions and gossip.

Past research on the Internet also indicates that gratifications, such as enjoyment, forge social ties (Diddi & La Rose, 2006), in that enjoyment works as a construct that is used to understand an individual's evaluation and affection towards the online usage (Koh & Kim, 2003). It is also congruent with Lin et al. (2008), who consider the notion of enjoyment as explaining an act to perform or an activity one engages in (a sensation).

It is also noted in some studies that the constructs of pleasure and play are related to enjoyment. However, in this research, play and pleasure are examined differently from enjoyment because, according to Telfer (1980), enjoyment differs from pleasure by the scope of the object that is used to please the external occurrences of the consumer, where enjoyment generally focuses on the activities in which one engages. However, Millar (1976) regards play as observed behaviour that is derived as the result of a plan and is out of the person's control, which refers to extrinsic experiences. Millar adds that consumers find a positive affect in a playful activity, but not mental fulfilment, as the extent the enjoyment gives towards fulfilling personal needs. Hence, this research hypothesises that ENJ has a positive influence on INNO and ADOPT.

Second Order Construct – Entertainment (ENT)

Entertainment is operationalised as *the way social media serves as a means for entertaining and escaping pressure* (Ducoffe, 1996; Chen et al., 2002). The value of media entertainment is attributed to the ability to satisfy the need of consumers for emotional release and relief of anxiety (Ruggiero, 2000; Siekpe & Kamssu, 2005; Lee & Ma, 2012). Conversely, research on content contribution on mobile applications also suggests that contributing content on such platforms provides a good source of entertainment (Chua, Goh & Lee, 2012). With regards to news consumption, research has also shown that entertainment is positively related to Internet news reading but not with traditional newspaper reading (Diddi & La Rose, 2006).

Consequently, entertainment is deduced to be a spontaneous action that stems from the holistic appraisal of the gratifications and inconveniences associated with the experience of emotions in a specific media context (Bartsch & Viehoff, 2010). Hence, this research hypothesises that ENT has a positive influence on INNO and ADOPT.

Second Order Construct – Interactivity (INT)

Social media is an interactive media that enables two-way communication interaction rather than one directional transmission or distribution of information to an audience like traditional media (Mayfield, 2008). Traditional electronic media, such as television and radio deliver a linear communication mechanism whereas social media provides a non-linear or two-way communication environment (Rowley, 2004).

The interactive nature of social media suggests that interactive innovations that offer two-way communication can speed-up the adoption process because they attain a critical mass of users more quickly as proposed by Rogers (2003). According to Marcus (1990), in the case of interactive innovations, the possibility of earlier adopters to influence later adopters is high. Interactivity perceptions also include consumer characteristics and situations. Thus, the perceived values of interactivity contribute to a positive attitude towards innovation, which affects the adoption (Song & Zinkhan, 2008). The quality of communication is the most important determinant of interactivity (Rafaeli, 1988). Therefore, interactivity is operationalised *as a process of message exchange* (Song & Zinkhan, 2008). Hence, this research hypothesises that INT has a positive influence on INNO and ADOPT.

4.3.1.2 First Order Construct – Social Needs

Social needs are operationalised based on Katz et al. (1974) as *affiliation needs where the consumer intends to be part of a group, wants to be recognized as part of the group and relates to a sense of belonging*. Based on this, it is presumed that social needs has two measured constructs: (i) Social Influence (SIF) and (ii) Social Interaction (SIN).

Social influence and social interaction are both important motives that drive SOCIAL towards adopting social media. It is based on the argument that much of the previous research on motivation identifies the significance of social connections as a motivator for and benefit from participating in online media. The order of the first order and second order constructs is illustrated in Figure 4.3.

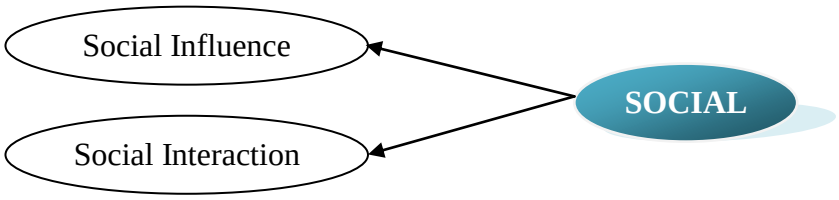


Figure 4.3: First and Second Order Constructs for Social Needs

Second Order Construct – Social Influence (SIF)

It is noted that research shows support for the role of subjective norms that influence behavioural intentions (Fishbein & Ajzen, 1975; Ajzen, 1991). Chiasson & Lovato (2001) find that subjective norms are the significant antecedents of the adoption of information systems. The subjective norm is posited as having a direct influence on consumers' social media adoption. This is because the group (friendship connection in social media) normally acts as a strong reference point to individuals, increasing compliance and the desire to be accepted as one of the group members. Such influences are likely to be stronger than the more diffuse and less direct and personal, societal norms. As such, it is conjectured that social influence would positively predict social media adoption.

Thereby, social influence is operationalised as *the degree to which a consumer perceives that important others believe he or she should use certain technology*

(Venkatesh et al., 2003). Hence, this research hypothesises that SIF has a positive influence on INNO and ADOPT.

Second Order Construct – Social Interaction (SIN)

Howard and Corkindale (2008) found that socializing is positively related to the consumption of online news services. In terms of social media use, Park, Kee, and Valenzuela (2009) note that socializing is regarded as one of the gratifications that motivate college students to participate in Facebook groups. In line with this finding, Dunne, Lawlor, and Rowley (2010) conclude that maintaining relationships in the social context is a key driver for using social networking sites.

Taking these factors into consideration, it is speculated that social media platforms offer features that potentially foster the development and maintenance of relationships for social media users which in turn become a shared social experience. Sun et al. (2008) claim that one of the motives for Internet usage is social interaction.

Therefore, social interaction is operationalised as *communication that occurs between two or more individuals, in which each person is aware of both his or her own membership in the group and relationships to and with others that belong to the group and in which the interactions occur primarily through an Internet venue to achieve mutually shared goals* (Bagozzi et al., 2007). Hence, this research hypothesises that SIN has a positive influence on INNO and ADOPT.

4.3.1.3 First Order Construct – Tension Release Needs

According to Kohut (1977), the human organisation of experience is composed of the needs for grandiosity, the needs for idealization and the needs for an alter ego or belongingness. This conception emphasises the relationship between the self and self-objects, which are the cognitive representations of other people and their actions towards developing an attitude. These needs provide the structure and motivation for the tension release needs for this research.

Tension release needs are operationalised based on Katz et al. (1974) as *the need for escape and diversion from problems and routines*. Based on this operationalisation, it is presumed that TENSION has four measured constructs: (i) Belongingness (BLG), (ii) Companionship (CSHIP), (iii) Playfulness (PLY), and (iv) Escapism (ESC). The order of the first order and second order constructs is illustrated in Figure 4.4.

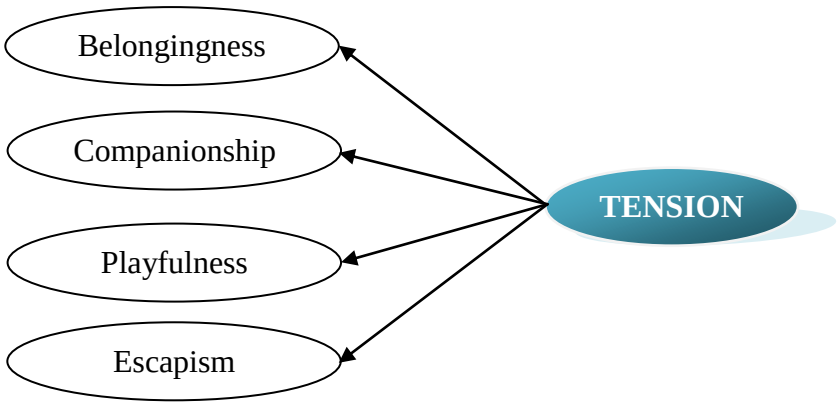


Figure 4.4: First and Second Order Constructs for Tension Release Needs

Second Order Construct – Belongingness (BLG)

According to UGT, individuals interact with other media users to achieve a sense of belonging (Rubin & Windahl, 1986). Koh and Kim (2003) find that belongingness is

one of the important indicators to determine virtual community adoption. Several scholars have uncovered possible relationships between the socialising gratification and media consumption to achieve some degree of belongingness (Baumeister & Leary, 1995; Lee & Robbins, 1995).

Griffiths (1998) explains that when participating in a social activity, the social participation becomes the motive or is seen as a way to facilitate and achieve other possible motives. Having to have special features of the Internet lets the consumer build a sense of belongingness towards the medium. Other research focuses on how belongingness interacts with overall well-being and feelings of individual loneliness, which has been found to have a direct effect on individual well-being (Reddy, Baum, Fleming & Aiello, 1981; Rook, 1987). However, Lee and Robbins (1995), who studied the social connectedness and social assurance scale, confirm that a sense of belongingness influences individual perceptions towards an object, as well as how the individual would behaviourally respond in demanding social situations.

Hence, belongingness is operationalised as being *part of to avoid feelings of loneliness and alienation* (Kohut, 1984). Hence, this research hypothesises that BLG has a positive influence on INNO and ADOPT.

Second Order Construct – Companionship (CSHIP)

According to Lee and Robbins (1995), individuals build companionship from early infancy and extend it throughout their adult life. As a human being grows, the companionship serves as a model that imitates and provides the experience of likeness.

Companionship has been found to predict social satisfaction and well-being (Baldassare, Rosenfield & Rook, 1984), alleviate loneliness (Rook, 1987), increase leisure experiences (Unger, 1984), and, provide a point of social connectedness and assurance (Lee & Robbins, 1995). Likewise, peer affiliation or friendship connection has been found to relate to self-esteem and mood, reduce stress and facilitate social interaction and friendships (Reddy et al., 1981; Wong & Csiksazentmihalyi, 1991). Also social connectedness has been linked to psychosocial development by providing self-esteem and security (Reddy et al., 1981). Rook (1987) also indicates that companionship is the strongest predictor of loneliness and social satisfaction.

Accordingly, companionship is operationalised as *the feeling of being together and being a member of a group of friends, spending time together, socializing and networking* (Ridings, Gefen & Arinze, 2002). Hence, this research hypothesises that CSHIP has a positive influence on INNO and ADOPT.

Second Order Construct – Playfulness (PLY)

Previous research has revealed that attitudinal outcomes of emotion, pleasure and satisfaction result from a playfulness experience (Sandelands, Asford & Dutton, 1983). According to Moon and Kim (2001), playfulness is a critical factor that reflects the user's intrinsic acceptance of the Web. Playfulness is also known to affect flow in human interaction.

Playfulness measures how consumers experience fun when using and experiencing technology (Van der Heijden, 2004). In addition, Moon and Kim (2001) view playfulness as an intrinsic motivator, influenced by the user's experience with the environment, which is also related to technology in the context of this research.

Individuals with a positive playfulness belief towards technology view interactions with technology more positively than those with less positive playfulness belief. It was found that playfulness has a direct effect on the behavioural response to use the Web (Sledgianowski & Kulviwat, 2009).

Accordingly, playfulness is operationalised as *the degree to which a current or potential user believes that the social site will bring a sense of pleasure* (Sledgianowski & Kulviwat, 2009). Hence, this research hypothesises that PLY has a positive influence on INNO and ADOPT.

Second Order Construct – Escapism (ESC)

Hirschman (1983) conceptualises that escapism is a utilitarian function because it relieves individual mental burdens. When consumers are so absorbed by the use of technology, they tend to escape from reality; hence the demands of performing a certain task are thus lowered. At this state of commitment, consumers lose track of time (Saade & Bahli, 2005).

Accordingly, the empirical results described by Saade & Bahli (2005) assume that escapism contributes to the perception of usefulness. However, particularly in virtual world settings escapism not only contributes to the perceptions of usefulness but also to the impression of entertainment (Jung & Kang, 2010). Consumers are expected to become immersed in the use of the virtual world and escaping reality will relieve them from their daily cares or boredom (Close & Kukar-Kinney, 2009).

Escapism is an important characteristic of the virtual world as the Internet offers features that allow users to represent themselves digitally and anonymously. Consumers

are not limited to their mere real life identities and are able also to nurture their autonomy by creating their own self-images and acting accordingly (Gilbert, Murphy & Avalos, 2011). Rubin, Haridakis, and Eyal (2003) suggest that media serves as a social relationship, which functions on different levels, in that media is used to connect with, or escape from real-life relationships, and can also be used to form parasocial relationships.

Therefore, escapism is operationalised as the *extent to which the user becomes so absorbed that they tend to fulfil their desire to 'leave' the reality in which they live in a cognitive and emotional way* (Henning & Vorderer, 2001). Hence, this research hypothesises that ESC has a positive influence on INNO and ADOPT.

4.3.2 Assess to Innovation Characteristics

Innovation characteristics have been proposed to be a mediator for the consumer's adoption of social media. Ostlund (1974), and Labby and Kinnear (1985) suggest that innovation characteristics are a significant construct that can determine adoption, and the predictive power of this variable is stronger.

Innovation is an idea, practice or object that is perceived as new by an individual. Innovation characteristics are operationalised as *the characteristics of innovation that are perceived by individuals as useful to help explain the rates of adoption* (Rogers, 2003). INNO, which is perceived by individuals as having a greater (i) Relative Advantage (RA), (ii) Compatibility (COM), (iii) Trialability (TRL), (iv) Observability (OBS) and less (v) Complexity (COX), are the dimensions that is presumed to enhance

the adoption of innovations (Rogers, 2003). The order of the first order and second order constructs is illustrated in Figure 4.5.

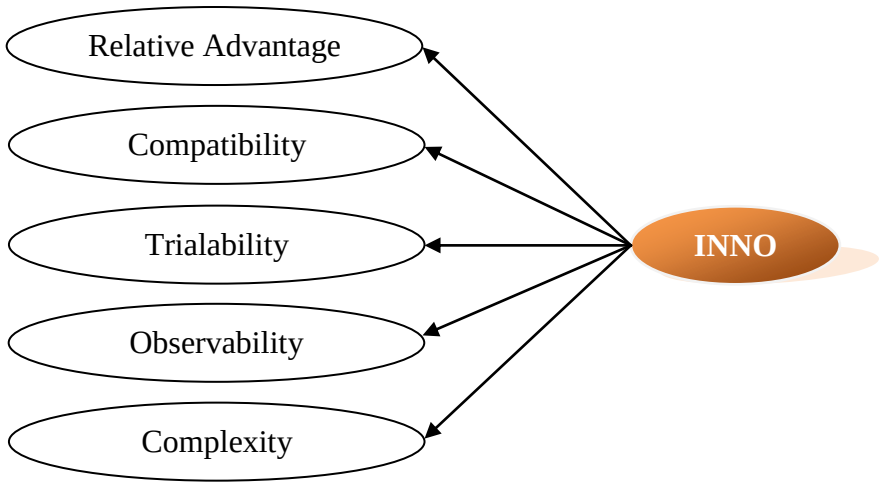


Figure 4.5: First and Second Order Constructs for Innovation Characteristics

Second Order Construct – Relative Advantage (RA)

The nature of the innovation determines the type of relative advantage that is important to the adopter. Diffusion scholars have found relative advantage to be one of the strongest predictors of an innovation's rate of adoption. Past investigations of the perceived attributes of innovation almost universally report a positive relationship between relative advantage and rate of adoption. Past research on the perceived attributes of innovation suggest that relative advantage is positively related to acceptability, thus making it as one of the most effective factors for predicting acceptability or adoption (Kitchen & Panopoulos, 2010; Ho & Wu, 2011).

Therefore, relative advantage is operationalised as *the degree to which an innovation is perceived as being better than the idea it supersedes*. The degree of relative advantage, often expressed as economic profitability, conveys social prestige (Rogers, 2003). Hence, this research hypothesises that RA has a positive influence on ADOPT.

Second Order Construct – Compatibility (COM)

An innovation can be compatible or incompatible with sociocultural values and beliefs, previously introduced ideas and/or client needs for the innovation. Innovation that is incompatible with cultural values can block adoption. Innovation should be compatible with both cultural values as well as previously adopted ideas. Compatibility of an innovation with a preceding idea can either speed up or retard the rate of adoption. Old ideas are the main mental tools that individuals utilize to assess new ideas and give them meaning. Individuals cannot deal with innovation except on the basis of the familiarity. The perceived compatibility of the new idea with the previous experience of potential adopters lead them to utilize the innovations correctly (Garcia & Calantone, 2002; Rogers, 2003; Kitchen & Panopoulos, 2010).

One indicator of the compatibility of an innovation is the degree to which it meets a felt need that the potential adopter has towards the innovation. Potential adopters may not recognize that they have a need for an innovation until they become aware of the new idea or its consequences. Thus, one dimension of compatibility is that an innovation is perceived as meeting the needs of the system. When felt needs are met, a faster rate of adoption usually occurs.

Therefore, compatibility is operationalised as *the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of the potential adopters*. An idea that is more compatible is less uncertain to the potential adopter and fits more closely with the individual's situation. Such compatibility helps the individual give meaning to the new idea so that it is regarded as more familiar (Rogers, 2003). Hence, this research hypothesises that COM has a positive influence on ADOPT.

Second Order Construct – Trialability (TRL)

The personal trying of an innovation is a way for an individual to give meaning to an innovation and to find out how it works under one's own conditions. If an innovation can be designed so as to be tried more easily, it will have a more rapid rate of adoption (Davis, 1989; Venkatesh et al., 2003).

Trying a new idea involves re-inventing it so as to customize it more closely to the individual's condition. An innovation may actually be changed during its trial. Relatively, earlier adopters of an innovation perceive trialability as more important than do later adopters. More innovative individuals have no precedent available to follow when they adopt, while later adopters are surrounded by peers who have already adopted the innovation (Davis, 1989; Rogers, 2003).

Therefore, trialability is operationalised as *the degree to which an innovation may be experimented with on a limited basis.* New ideas that can be tried on the instalment plan are generally adopted more rapidly than innovations that are not divisible. Some innovations are more difficult to divide for trial than others. (Rogers, 2003). Hence, this research hypothesises that TRL has a positive influence on ADOPT.

Second Order Construct – Observability (OBS)

Observability is operationalised as the *degree to which the results of an innovation are visible to others*. Some ideas are easily observed and communicated to other people, whereas other innovations are difficult to observe or to describe to others (Rogers, 2003; Kitchen & Panopoulos, 2010). The easier it is for individuals to see the results of an innovation, the more likely they are to adopt. Such visibility stimulates peer discussion of a new idea, as the friends and neighbours of an adopter often request

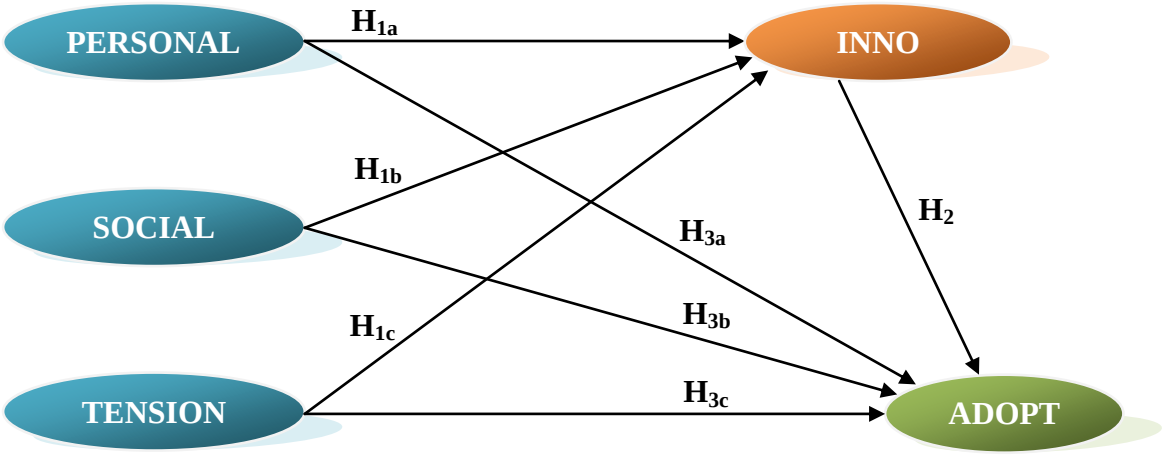
innovation evaluation information about it (Davis, 1989; Rogers, 2003). Hence, this research hypothesises that OBS has a positive influence on ADOPT.

Second Order Construct – Complexity (COX)

Complexity may not be as important as relative advantage or compatibility for many innovations, but for some new ideas complexity is a very important barrier to adoption (Davis, 1989; Rogers, 2003). Therefore, complexity is referred to as *the degree to which an innovation is perceived as relatively difficult to understand and use*. Any new idea may be classified on the complexity-simplicity continuum. Some innovations are clear in their meaning to potential adopters while others are not (Rogers, 2003). Hence, this research hypothesises that COX has a positive influence on ADOPT.

4.4 Formulation of Hypotheses

The framework presented in the preceding section shows how the links for all variables were posited. It is noted from the literature review that each variable from media needs and innovation characteristics has a positive impact on adoption. Also, it is noted that the two independent variables (i.e. media needs and innovation characteristics) are correlated. Based on the proposed research framework on the antecedents of social media adoption, this section formulates a set of hypotheses that are derived from the past studies and literature reviews. This is to explore the relationships among the constructs of the research. The proposed relationships of the constructs and the proposed hypotheses are presented in Figure 4.6



Key: PERSONAL – *Personal Needs*; SOCIAL – *Social Needs*; TENSION – *Tension Release Needs*; INNO – *Innovation Characteristics*; ADOPT – *Adoption (Behavioural Response)*

Figure 4.6: The Hypotheses as Depicted in the Research Framework

4.4.1 Relationship Between Media Needs and Innovation Characteristics

Understanding on why people accept and reject technology has proven to be one of the most challenging issues (Davis et al., 1989; Swanson, 1988). Researchers have studied the impact of user's beliefs and attitudes on technology usage behaviour (Davis et al., 1989; Srinivasan et al., 2002) and how, in turn, these beliefs and attitudes are influenced by various factors including the system's design characteristics (Moore & Benbasat, 1991; Swanson, 1988) and involvement in system development and system development process (Baroudi & Orlikowski, 1988; Franz & Robey, 1986). This may be due to the wide array of different beliefs, attitudes and satisfaction measures that have been employed, often without adequate theoretical or psychometric justification (Davis et al., 1989).

Incorporating all of the above mentioned, it is hypothesized that:

H_{1a} *Personal needs (TRN, ENJ, ENT, INT) positively influence innovation characteristic of social media*

H_{1b} *Social needs (SIF, SIN) positively influence innovation characteristic of social media*

H_{1c} *Tension release needs (BLG, CSHIP, PLY, ESC) positively influence innovation characteristic of social media*

4.4.2 Relationship between Innovation Characteristics and Social Media Adoption

This research framework explicitly shows that the innovation characteristics of social media play the role of a mediator in the relationships between consumer media needs and adoption. A mediator is a mechanism through which a predictor influences an outcome variable (Baron & Kenny, 1986; Zhao, Lynch & Chen, 2010). The main purpose of meditational analysis is to examine why an association between predictor (media needs) and outcome (adoption) exists (Frazier, Tix & Barron, 2004; Zhao et al., 2010). The assumption is made that the mediator is caused by the predictor variable and that it also causes the outcome variable.

Raju (1980) suggests that innovation intervenes between the need for stimulation and innovative behaviour as a mediator variable. Empirical results show a positive and significant relationship between the need for stimulation and innovation (Joachimsthaler, 1984; Roehrich, 2004). As a theoretical basis of many human activities, the need for stimulation is perceived as an antecedent of adoption, either directly or indirectly, through innovation.

Incorporating all of the above mentioned, it is hypothesized that:

H_2 *The innovation characteristic (RA, COM, TRL, OBS, COX) of social media influences the adoption behaviour of the consumer*

4.4.3 Relationship Between Media Needs and Social Media Adoption

A more fruitful approach to this problem would seem to lie in an analysis of the psychological processes involved in the induction of behaviour. According to Cartwright (1949), and Lampe, Wash, Velasquez, and Ozkaya (2010), to influence the behaviour of another person, a chain of processes must be initiated within the person. These processes are complex and interrelated, however, in broad terms they may be characterised as creating a particular cognitive structure, creating a particular motivational structure and creating a particular behavioural structure.

In other words, as explained earlier, behaviour is determined by the beliefs, opinions, and facts a person possesses and by the needs, goals and values a person has, and by the momentary control held over their behaviour. From the broad literature reviews covered on consumer and media, it is noted that certain attributes define certain types of media, thus these attributes affect consumer needs towards the media (Greenberg & Salwen, 2009).

However, the social influence and social interaction of the member and individual environment outside the online community can also have a significant influence on technology usage decisions (Venkatesh et al., 2003; Howard & Corkindale, 2008).

In the study of motivation by Wasko and Faraj (2005), they conceptualised the social reasons for participation within the context of social capital. They divided it into structural, which relates to the density of networks, thickness and thinness of ties between individuals; cognitive, which relates to the level of shared skills, knowledge, discourse and practice among network participators; and relational, which refers to identification with the collective through shared norms and trust.

The findings from Wasko and Faraj (2005) can be used to suggest that the social reasons for participating in social media technologies are multi-layered and that contextualising these interactions within the concept of social media may be helpful in gaining a more meaningful understanding of participation.

Best and Krueger (2006), in their study concerning the understanding of social motivation for participating in social media, found that participating in social media technologies promotes bridging weak ties by expanding the scope of connections that can be made with others. Thus, it is suggested that social motivation enhances existing social connections and expands ties into a new and larger community.

Also, Song and Walden (2007) offer an interesting perspective on the importance of weak social ties. It was found that the larger the network; the more attractive it is because of the perception that there will be more abundant and more relevant information sharing. Users have concern over the nature of social exchange in terms of extrinsic rewards relating to reputation and image, and intrinsic rewards relating to enjoyment through helping others.

In addition, in Ellison et al.'s (2007) study of the role of the social capital of a social networking site – Facebook – it was found that the participation is related to the ability of students to form and maintain social capital. In terms of bonding social capital, Facebook works as a way of maintaining and strengthening past relationships and ties that already exist. It also contributes to bridging social capital in that it is useful for expanding an individual's network by increasing the number of weak ties.

Another new direction has been to focus on media use for satisfying particular needs; for instance, one possible use of the mass media is to relieve tension. Canary & Spitzberg (1993) found evidence supporting this, but the relationship depends on the extent of tension that a person has. They found that the heaviest use of the media to relieve loneliness was in the situationally lonely, or those who were temporarily lonely. They found less use of the media to relieve loneliness in the chronically lonely, or those who have felt lonely for a period of years. The explanation seems to be that the chronically lonely attribute their loneliness to internal factors and so believe that communication itself provides relief.

In addition, Lampe et al. (2010) explain that motivation contributes to content-generation building for the online community, and show that different motivations for use are tied to different patterns of contribution by its members. Additionally, Raacke and Bonds-Raacke (2008), and Papacharissi and Mendelson (2011) expose that in order to better understand the extent to which users expect to enjoy the benefits of media, various needs and desires that they establish towards the media require fulfilment (Raacke & Bonds-Raacke, 2008; Papacharissi & Mendelson, 2011).

From previous research, it was also suggested that the way individuals use the Internet, such as for gathering information, meeting new people, and communicating with both geographically distant and close others, contributes to the prediction of psychosocial outcomes over and above the time spent online. Similar needs found concerning this include social motivation, achievement motivation and immersion (Perse & Ferguson, 2000; Shen & Williams, 2011; Smock et al., 2011).

Consumer choice of media is based on the perception that the media benefits will affect the medium they choose to fulfil a particular task. The understanding of user expectations about the nature of their interpersonal, informational and other needs will influence user media choices (Daft, Lengel & Trevino, 1987; Smock et al., 2011).

Onyx and Bullen (2000), in their study of the motivation among communities, found that the strong communicator is the community membership, which represents a consumer's need to belong to a community with a substantial base. Best and Krueger (2006), and Song and Walden (2007) found that the motivation of friendship connections was identified as an opportunity for the consumer to maintain ties with existing and old friends or acquaintances.

Incorporating all of the above mentioned motives and needs, it is hypothesized that:

H_{3a} *Personal needs (TRN, ENJ, ENT, INT) are positively related to social media adoption*

H_{3b} *Social needs (SIF, SIN) are positively related to social media adoption*

H_{3c} *Tension release needs (BLG, CSHIP, PLY, ESC) are positively related to social media adoption*

4.5 Chapter Summary

The interactive quality of the social media creates a certain degree of interdependence among the adoption decisions and the members of a system. Based on this perspective, the social system surrounding a consumer is presumed to affect their social media adoption behaviour.

In this section, a model is developed that provides a system of concepts that evoke new and interrelated research directions that compose old theoretical and disciplinary differences, and, in general, bring some order out of the observed social media phenomenon. This research model helps to explain the motives underlying social media adoption, and, thus, provides input into the relationship between user motivations and technology innovation. The understanding concerning the need to use social media helps to develop insight into consumer behaviour as a whole.

The research model theorizes that behavioural response (adoption), as determined by Personal Needs, Social Needs, Tension Release Needs and Innovation Characteristics, strongly influences Social Media Adoption. The following section will explain on the research methodology used for the analysis of the data and hypothesis testing.

Chapter Five
RESEARCH METHODOLOGY

5.1 Introduction

Thus far, the previous chapters of this thesis sought to establish the context of the research significance and rationale for the conduct of this research and the conceptual framework. As noted, the main purpose of this research is to examine consumer media needs on social media. The review of the literature suggests that there is much room for furthering the understanding of the consumer media needs that were revealed through the knowledge gaps identified in past research. This led to the development of this research model, which integrates the various aspects of media needs and technology innovation.

The purpose of this chapter is to explain and justify the research methodology that was chosen, which will help to provide answers to the research questions, achieve the research objective, explain the way in which the variables are measured and present the research design and data analysis techniques. This chapter provides a description of the steps taken to address the research problem and to test the hypotheses. It is also aimed to link the proposed conceptual model and related hypotheses with the empirical results presented in Chapter Six.

In doing so, this chapter begins by presenting an overview of the research philosophy and epistemology embraced. Guided by this justification, the choice of research paradigm is given. The rest will then explain the methodology undertaken including the research design, description of the chosen dataset, sample design, data collection

methods and analysis techniques of the data, assumptions, and, lastly, the chapter summary.

5.2 Research Paradigm

Many researchers in social studies have suggested a range of research approaches or methodologies for investigation (Hughes, 1994; Cavana, Delahaye & Sekaran, 2001; Easterby-Smith, Thorpe & Lowe, 2002). According to Cavana et al. (2001), a fundamental axiom of good research is that the methods applied should be based on the research questions posed.

Bryman (2004) stresses that the selection of research design is vital in the sense that it is explored in relation to three main research considerations: (i) the nature of the relationship between theory and research, (ii) the epistemological orientation of a research, and (iii) the knowledge relating to the social world. Apropos to this, Johnson and Duberley (2006), categorise research paradigms into positivist, interpretivist and critical research, while Guba and Lincoln (1998) categorise them into positivism, post-positivism (realism), critical theory and interpretivism or constructivism.

While acknowledging that the research paradigm is important, Pollock and Cruz (1999) emphasise that no single approach of research methodology should be claimed as a perfect research paradigm. According to Denscombe (2003), a good social research depends so much on adopting an approach that is suitable for the topic or phenomenon explored. Possibly, the choice of a particular paradigm is not due to the debate between positivists, interpretivists or critical research, but rather it reflects the differences among the subjects of interests (Gill & Johnson, 1997) or the chosen techniques available due

to the research tools (Easterby-Smith et al., 2002). What is practical in choosing the research paradigm depends greatly on what needs to be accomplished and what kinds of data are required in that it is a matter of what is needed in research and what works best to achieve the objective of the research (Babbie, 2007; Bryman, 2004; Denscombe, 2003).

Also, consistency between the objectives of a research, research questions, research methodology, and the personal philosophy of the researcher are another essential element in developing the rationale for any conduct of research. Thus, it can be concluded that in the research endeavour, philosophical positions explain the nature of the subject matter, what can be known from the subject matter and how this knowledge can be accomplished (Kuhn, 1970). By considering all these, this research takes a stance on the positivist paradigm in which it uses deductive theory construction or deductive reasoning, which is elaborated upon in Table 5.1. Thus, the definition of positivist that can best describe this research is adopted from Denscombe (2003, p14) as follows:

> *'Positivism is an approach to social research that seeks to apply the natural science model of research to investigations of social phenomena and explanations of the social world'.*

Specifically, referring to the philosophy of positivism, this research seeks to understand consumer needs and motivation when they adopt social media, where the results will be analysed scientifically concerning how such needs and motivation affect consumer behavioural response. When stipulating the 'what' and 'how' from the independent and mediating variables conjectured by this research, the result is expected to find an association and relationship between the predictors and outcomes of this behaviour.

Table 5.1: Central Tenets of Positivism in Research

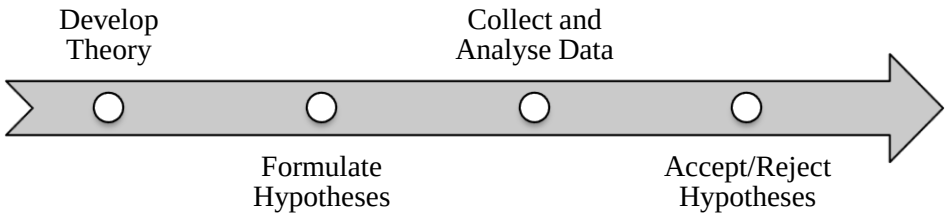
Aim of Research	
Generation of causal laws	The aim of the research should be to identify causal explanations and fundamental laws that explain regularities in human social behaviour
Research Approach	
Unity of natural and social science method	The method of the natural sciences is the only rational source of knowledge and should therefore be adopted in the social sciences. This implies a preoccupation with: ▪ Internal validity ▪ External validity ▪ Reliability ▪ Operationalisation
Relationship of Researcher with the Researched	
Independence theory and neutral observational language	The observer is independent of what is being observed. Therefore, the observer can stand back and observe the world objectively
Value freedom	The choice of what is to be studied, and how to study it, can be determined by objective criteria rather than by human beliefs and interest
Correspondence theory of truth	Theory can be tested against irreducible statements of observation – the 'facts' of the situation. Research is concerned with producing accounts that correspond to an independent reality

(Source: Johnson & Duberly, 2006)

5.2.1 Theory Orientation

As noted, this research takes a positivist approach using deductive theory construction or deductive reasoning. Deductive theory construction describes the development of a

theoretical proposition that is used to build concrete empirical evidence (Cavana et al., 2001). The process of deductive theory construction is illustrated in Figure 5.1, which shows the reasoning progress from developing theory through the research framework to accepting or rejecting the hypotheses or research proposition. Babbie (2007) clarifies that in the research reasoning progress, logically or theoretically, ideas are expected to happen, be observed and tested to see whether the research assumption or pattern actually occurs in the real world, or generalisation.



(Source: Cavana et al., 2001)

Figure 5.1: Deductive Reasoning

In some research, deductive theory construction which is also called the theory-then-research approach strategy, formulates hypotheses from theory and uses collected data to examine them. This includes developing a theoretical model for testing, creating a number of hypotheses that reflect the relationships between components, designing a research measure to investigate the model, testing the hypotheses using the collected data and purifying the model and its associated theories (Reynolds, 1979). The key advantage of deductive theory construction or the theory-then-research approach strategy is that it allows testing of the hypotheses and relying on objective measures (data) to support the findings (Wicks & Freeman, 1998).

According to Babbie (2007), there are two steps in deductive theory construction. The first step is to pick an area of interest. In this sense, social media being the phenomenon

today that touches the life of almost every consumer online is assumed to have some impact on consumer behavioural response, especially with regards to consumer media needs and motivation, which is assumed to speed the rate of social media adoption. Thus, this research area of interest is initiated by the general idea of social media usage. From the general idea it is then drilled to the development of a theoretical framework. Considering this interest, it gives good reason for this research to understand why social media is taken as the occurrence of recent online phenomena and whether or not it affects the behavioural response of consumers.

The second step of deductive theory construction is that it should explain the research interest by specifying the range of theory that represents the phenomenon (Babbie, 2007). Knowing that this research originated from old marketing and consumer behaviour theory, these theories cannot stand on their own to explain this phenomenon. They need to merge with innovation and technology theory because social media exists through the technology platform. Some empirical elaborations are found to be relatively trivial, technical or even narrow in interest if these theories from different disciplines are not put together. Therefore, going back to the early theories of media, psychology and consumer behaviour, understanding how consumers behave and the factors that induce them to use media is the primary inquiry in this research. Then, considering the nature of research that occurs in the online context where technology plays a significant role in the adoption process, a theory that explains technology and innovation is incorporated.

In addition, Nagel (1979) suggests that human beings frequently modify their habitual modes of social behaviour as a consequence of acquiring fresh knowledge concerning the events in which they are participating or the society to which they belong. Thus, due

to the frequent change in human behaviour, this research deduces its theoretical construction based on two facets of reasoning, as proposed by Nagel; that is, to (i) investigate social phenomena and (ii) to conclude such phenomena using an appropriate research methodology, which will be discussed in the subsequent section.

On another note, Hunt (2002) stresses that most philosophers of social science seek answers as to why a phenomenon occurs by reasoning the relationship between the antecedent of the phenomenon that is expected to occur and its predicted outcome. Thus, in this research, any explanation of attitudinal movement from using one media to another is presumed to be due to the human personal factor and added value of the technological factor.

However, this research being under the umbrella of the social sciences is an exploratory research. According to Babbie (2007), for exploratory research, hypotheses are limited to the research scope. Therefore, when formulating the research hypotheses, human being's conventional properties, such as perceptiveness and intelligence, should be pinned down to create a definite measure. Accordingly, this research attempts to develop fresh concepts where it merges three important elements of social sciences – the consumer, media and technology – as one integrated model to study social media adoption. These elements are put together to determine the consumer affective and cognitive involvement in social media.

As a conclusion on deductive reasoning construction and theoretical orientation, this research aims to pragmatically gain knowledge on the social media phenomenon, especially in the explanation of dramatic changes in consumer behavioural response,

which is also observed as inter-subjectively certifiable with the salient consumer, technology and underpinning media theory.

5.2.2 Ontological and Axiological Assumptions of the Research Method

Philosophically, notwithstanding what was said earlier about understanding the research phenomena at large, this research also makes claims about what knowledge is (ontology), what values go into it (axiology), how research is written (rhetoric) and the method of studying the inquiry (methodology).

Creswell (2003) explains that there are three approaches to research – qualitative, quantitative and mixed methods strategy – as explained in Table 5.2. It is noted that the qualitative and quantitative approach have been used and well discussed for decades by scholars, however, mixed methods strategy is noted to be new and still developing in its form and substance. Hence, Creswell (2003) suggests three questions for the design of the research as follows:

i. What knowledge claims are being made by the researcher (including theoretical perspective)?
ii. What strategies of inquiry will inform the procedures?
iii. What methods of data collection and analysis will be used?

When designing this research, these three alternative inquiries proposed by Creswell (2003) play a significant role in identifying the quality of the research findings. Different types of research problems call for a different type of approach. Having outlined the research gaps earlier in Chapters Two, Three and Four, this research takes a mixed-methodology approach as its strategy of inquiry.

Table 5.2: Comparison between Qualitative, Quantitative and Mixed-Methods Research Approach

Strategy of Inquiry	Method	Usage
Qualitative Research Approach		
Ethnographic Design	▪ Emerging methods ▪ Open-ended questions ▪ Field observation an data documentation ▪ Text and image analysis	▪ Collect meaning of concept from the participants ▪ Focus on a single concept and phenomenon ▪ Bring personal value into the study ▪ Study the context or setting participants ▪ Validate the accuracy of findings ▪ Make interpretations of the data ▪ Create an agenda for change/reform
Narrative Design	▪ Open-ended interview and audio-visual data ▪ Text and image analysis	
Quantitative Research Approach		
Experimental Design Quasi-Experimental Design	▪ Predetermined ▪ Closed-ended questions ▪ Performance, attitude, observation and census data ▪ Statistical analysis	▪ Test to verify theories or explanations ▪ Identify variables to study ▪ Relate variables in questions or hypotheses ▪ Use standards of validity and reliability ▪ Observe and measure information numerically ▪ Use unbiased approach ▪ Employ statistical procedures
Mixed-Methods Research Approach		
Mixed-Methods Design	▪ Both predetermined and emerging methods ▪ Both open-and-closed-ended questions ▪ Multiple forms of data drawing on all possibilities ▪ Statistical and text analysis	▪ Collect both quantitative and qualitative data ▪ Develop a rationale for mixing ▪ Present visual picture of the procedure in the study ▪ Employ the practices of both qualitative and quantitative research

(Source: Creswell, 1994)

Mixed methods elaborate and expand on the findings of one method with another method, which is done by starting with the qualitative method for exploratory purposes and then followed by the qualitative method for generalising the results to a population. This is to ensure that generalisation can be detailed out in view to its meaning of phenomenon or concept for individuals (Bryman & Bell, 2007).

It is observed that, in the area of social science, mixed method research is slowly becoming a practicable research approach that bridges the gap between the qualitative and quantitative methodologies (Creswell, 1994; Tashakkori & Teddlie, 1998; Bahl & Milne, 2006). The mixed-method strategy is found to be the continuum of positivist studies in which the method works interdependently to explain the phenomenon (Bahl & Milne, 2006). Mixed method research can be conducted sequentially or simultaneously, where emphasis is given more to multiple stages of the research that takes into account the type of inquiry, data collection and analysis/inferences (Tashakkori & Teddlie, 1998). This will be further explained in Section 5.2.3 on triangulation.

Tashakkori & Teddlie (1998) outline four basic purposes for mixed method research: (i) *the development* where it is used to inform subsequent study, (ii) *the initiation* where it is used as a preliminary study to launch the main study, (iii) *the complementarity* where it is used as a concurrent examination of various facets of phenomenon through two or more studies, and (iv) *the interpretation* where it is used as a second study to explain or confirm the results of the main study. Davis et al. (2011) outline the benefits and challenges faced when using multiple methods research, as explained in Table 5.3.

Table 5.3: Benefits and Challenges of Multiple Methods Research

Benefits
▪ Provides stronger results through triangulation of the findings ▪ Answers broader research questions ▪ Compensates for various weaknesses of single research methods ▪ Tells a more comprehensive, complete and convincing theory ▪ Provides a holistic understanding of phenomena
Challenges
▪ Takes more resources (time, money and expertise) to conduct ▪ Requires understanding and training in multiple method studies ▪ Requires coordinating the work of a research team ▪ Encounters difficulties in the review process ▪ Difficulty in reporting results within journal page constraints

(Source: Davis et al., 2011)

In essence, the mixed method approach demonstrates robustness of the findings and external validity in that it gives the opportunity to triangulate the method, giving the reassurance of the pattern of convergence validity and enhances the degree of confidence in the research findings, thereby, Table 5.3 is used to justify the mixed method approach adopted in this research.

5.2.3 Mixed Method: Triangulation

As stated earlier, this study uses the mixed method approach. Hence, the study and findings must in some way follow a logical integration of qualitative and quantitative (Creswell & Tashakkori, 2007; Wu, 2012). According to Tashakkori and Teddlie (2003), and Creswell (2003), a few ways exist for mixing the qualitative and quantitative methods. According to Johnson and Onwuegbuzie (2004), and Wu (2012), there are two common aspects of viewing the mixed method approach: (i) *time ordering* either concurrently or sequentially of the qualitative and quantitative phases and (ii)

degree of dominance or either quantitative or qualitative methods. This is explained in Figure 5.2.

	Concurrent	Sequential
Equal Status	QUAL + QUAN	**QUAL →QUAN** **QUAN → QUAL**
Dominant Status	QUAL + Quan QUAN + Qual	QUAL → Quan/ Qual → QUAN QUAN → Qual/ Quan → QUAL

(Source: Johnson & Onwuegbuzie, 2004)

Figure 5.2: Matrix of the Mixed Method Design

This matrix produced by Johnson and Onwuegbuzie (2004) describes 'QUAN' as quantitative, 'QUAL' as qualitative, capital letters denote high priority and weight, the sign '+' stands for concurrent and the sign '→' stands for sequential. Having clarified this, the present research takes the upper right quadrant approach – sequential triangulation strategy (QUAL → QUAN) – as advocated by Creswell (2003).

The sequential triangulation strategy involves integrating quantitative and qualitative research. This method is applied in this research, as it is believed that both methods are equally important to give an understanding of consumer attitude towards social media adoption and to develop a precise measurement. As noted, the literature that covers this study is basically on consumer fundamental needs to use social media, which includes psychological motives and psychological gratifications. In addition, this study stresses

the function of social media technology innovation, which is presumed to enhance the speed of social media adoption.

Therefore, this research adopts the mixed method of triangulation, where qualitative research is used to support the rational of the result that is obtained from the quantitative data analysis. Triangulation methods help to create synergy between these two important methods of data collection (Campbell & Fiske, 1959; Denzin, 1978; Creswell & Tashakkori, 2007).

Hence, the sequential triangulation strategy that is adopted for this research aims to deliver qualitative results from the focus group discussions followed by survey research for the statistical quantitative results. Consequently, when it comes to refining the research model, the approach helps to extend the model by:

i. Developing a construct to measure needs and motivation. Therefore, the qualitative method in the first stage of data collection will enrich the understanding of the construct by exploring more items from the qualitative analysis.
ii. Measuring the relationships between needs and technology innovation. Therefore, the second stage of data collection using the quantitative approach is used to measure the relationship between these variables.
iii. Enriching the validity of the research through the combination of both approaches, where, in the area of the consumer and social media study, the research scope is considered as new due to the fact that social media is a new media that exists online. Thus, using a qualitative and quantitative approach induces confidence in building the research model.

According to Bouchard (1976), blending and integrating a variety of data and methods, as triangulation demands, is seen as a continuum that ranges from simple to complex designs. In the triangulation technique, agreement between the qualitative and quantitative method enhance the belief that the results are valid. The process from simple design to complex design is explained in Figure 5.3.

Simple Design ---------- Complex Design

(Source: Bouchard, 1976)

Figure 5.3: Continuum of Triangulation Design

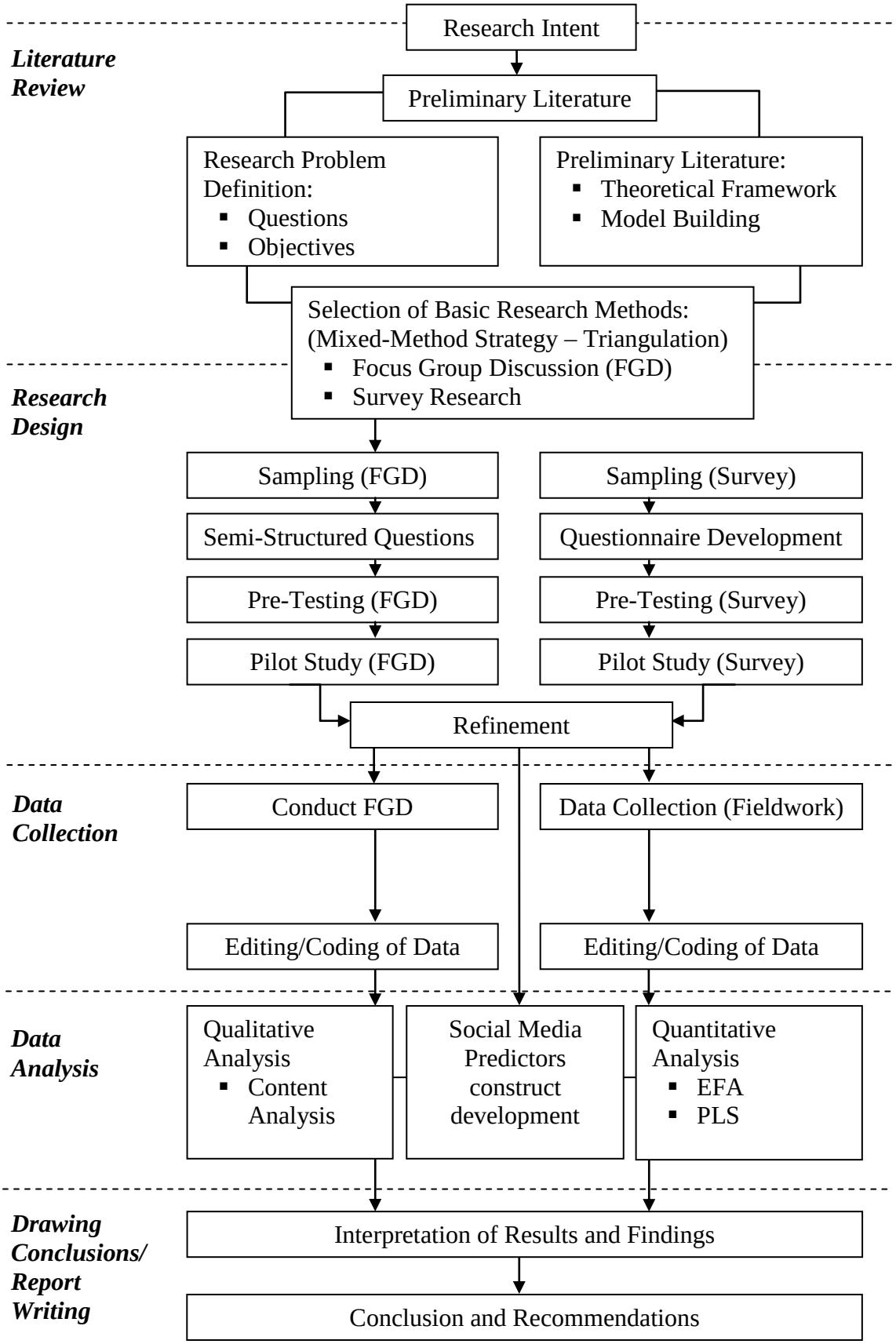
In essence, the triangulation method highlights some important aspects of research in that it allows the research to derive confident results; stimulate the creation of inventive methods as a new way of capturing a problem to balance with conventional data collection methods; uncover the unexpected dimension of a phenomenon where different viewpoints are likely to produce some elements that do not fit a theory, thus old theories are re-fashioned; lead to a synthesis or integration of theories that brings diverse theories to bear on a common problem; and serve as a critical test, by virtue of its comprehensiveness for competing theories. In light of the above mentioned, triangulation offers a new perspective for collecting and analysing the research data, where, more importantly, it is potent in fostering theory building, especially in a new study context, such as the consumer and social media.

5.3 Exploratory Research

As its name implies, the objective of exploratory research is to explore a problem or situation to provide insights and understanding. According to Cavana et al. (2001), exploratory research is undertaken when little is known about the situation at hand or when the information is available on how similar problems or research issues have been resolved in the past. Thus, for this research, extensive preliminary works need to be undertaken to gain familiarity with the social media phenomena and understand the occurrence before a model is developed. Fundamentally, this research is undertaken to better comprehend the behaviour of social media users, which is the focus of this study.

Exploratory research encompasses secondary data, pilot surveys, expert surveys, focus groups and unstructured observation (Malhotra & Birks, 2007). This research uses a mixed-method strategy in which the triangulation method is applied using sequential triangulation. In addition, focus group discussion is used to get a feel for the situation and to understand the phenomenon where the input gained from the focus group discussion undergoes further rigorous survey research. Certainly, for this research, exploratory study will help to grasp the phenomenon of interest for advancing knowledge through theory building and hypothesis testing.

Figure 5.4: Research Design Flow



Overall, it is believed that a phenomenological philosophy is relevant for the purpose of understanding how consumers adopt and adapt to the use of innovation-based media, i.e. social media. This research involves needs, motivation and technology innovation, insofar as these elements were not previously adopted in other consumer models. Thus, this requires exploratory research to play a part in the preliminary survey process. However, recognising the lack of objectivity that is associated with other philosophies, this study adopts a positivist, mixed method approach to the development of the key research instrument. The various elements of the study approach are further elaborated upon in the following sections, which is also summarised in Figure 5.4.

5.3.1 Qualitative Research – Focus Group

The first stage of the field research consists of in depth focus group discussions (FGD). The FGD is a research technique pertaining to qualitative research (Myers, 2009). The aim of the FGD is to collect information through group interaction and to discover new information from individuals (Cavana et al., 2001).

The term ‘focus group’ is believed to be derived from a radio programme study by sociologist Robert Merton that investigated audience reactions towards the medium (Catterall & Maclaran, 2006). Focus group discussion is used because it gives useful insight for the generation of ideas due to the interaction among the participants. To compare to in-depth interviews, the focus group is a better choice because discussion and group interaction is assumed to produce a better result, generate quality ideas and create an open, relaxed and anonymous atmosphere (Fern, 1982). In addition, a

conducive environment helps to generate data that are not obtainable by other research methods (Catterall & Maclaran, 2006).

In the theory of focus groups, as constructed by Bobby Calder in 1977, it is noted that the focus group technique has different philosophical and theoretical approaches. Calder identifies three main approaches: (i) exploratory, (ii) clinical, and (iii) phenomenological (Catterall & Maclaran, 2006). Based on these approaches and the nature of this research, the exploratory approach is the most appropriate for this research. This is because the exploratory approach is based on the underlying assumption that explain participant's attitude and behaviour when the participants were asked to do so in the discussion. Accordingly, this method is undertaken as a precursor to the survey to clarify the understanding of the questionnaire items and identify ideas and hypotheses for later testing in survey work. Therefore, the exploratory approach of focus groups that this research adopts helps to identify a range of drivers that cause consumer to adopt social media and is able to explore in-depth the effectiveness of the research framework and its measurement items.

Hence, the results from the FGD are then used to clarify the theoretical framework of the research and to generate items for the questionnaire, which will be subject to more rigorous testing. Using FGD allows the flow of the framework to be examined and the measurement items to be checked and modified if necessary for later use in the survey research.

5.3.1.1 Focus Group Participants

The selection of participants in qualitative research is considered an important task to ensure that participants willingly provide information representative of the target population (Cavana et al., 2001). However, Bryman and Bell (2007) argue that the issue of representativeness is less important in qualitative research than in quantitative research because it aims to make in-depth analysis.

According to Cavana (2008), the non-probability methods have a discrete advantage of rapidly accessing participants who are most likely to give rich information. Therefore, the participants included in the focus group interviews were selected following a convenience sampling approach. The approach basically involves collecting information from the population members who are conveniently available. Moreover, convenience sampling is most often used during the exploratory phase of a research project and is perhaps the best way of collecting basic information rapidly and efficiently. For this reason, the convenience approach is considered the best method, as the purpose of this stage is to explore more items relating to consumer attitude towards social media. This is supported by Minichiello, Aroni, Timewell, and Alexander (1990) who argue that non-probability methods of sampling are commonly used in qualitative research.

However, it is noted from Malhotra (2007) that the size of FGD is considered as an issue for debate in that it is argued that a group of less than eight is not likely to generate the momentum and group dynamics that is required for a successful session. Likewise, groups of more than twelve participants may be too crowded and may not be conducive for a cohesive and natural discussion. In contrast, Cavana et al. (2008) argue that small groups are likely to work best when the participants are interested in the

subject matter while large groups require considerable skill to manage the group discussion and tend to become more complex and formally structured.

On that note, Catterall and Maclaran (2006) outline the basic aspects of FGD – should last for one and a half hours, not exceed that time limit, should consist of up to eight participants in one session, homogeneity of personal characteristics is required and should consist of strangers rather than acquaintances.

In dealing with this issue, Malhotra (2007) suggests that FGD participants should number between eight to twelve while Cavana et al. (2008) suggest it should be between six to nine and Catterall and Maclaran (2006) suggest it should not be more than eight. ***Hence, in conducting the FGD for this research, the number of participants deemed best for each FGD was limited to eight per group. The input gained through the FGDs is then applied to the next stage of quantitative research.***

5.3.1.2 Semi-Structured Focus Group Discussion

The purpose of conducting semi-structured focus group discussions, as mentioned earlier, is to gain insights by listening to a group of consumers from the appropriate target segment about their behaviour concerning the usage of social media. The research is based on sequential procedures. The intention of a sequential procedure is to begin with the initial information, which is then used in modifying subsequent questions based on new knowledge gained from the discussion. The theme set for the FGD is designed based on the research objectives, which is intended to control the entire discussions, despite ensuring to receive appropriate answer with regards to that.

According to Cavana et al. (2001), three types of discussion are usually held in FGD: (i) structured, (ii) semi-structured, and (iii) unstructured. A structured FGD is governed by predetermined content questions, while a semi-structured focus group starts off with being unstructured and then the moderator brings in the predetermined, content based questions. Likewise, the unstructured approach uses an initial open primary question and then relies on the skills of the moderator to manage the process.

There are two types of semi-structured FGD, as proposed by Cavana et al. (2001): (i) the type that commences interaction as an unstructured then structured and (ii) the type that uses a pre-planned, logical approach to manage the process, which is also the way that is adopted in this research. Tregoe (1983), Zima (1991), Egan (1994) and Cavana et al. (2001) outlined a five-step model for managing the process of semi-structured interviews, which is used as the foundation for handling the FGD for this research. The five steps are as follows:

i. Exploring the current situation – probe for the current situation by identifying, clarifying and exploring the problem situations and unused opportunities
ii. Possible causes/options – involves listing, brainstorming, comparing and contrasting the possible causes or options
iii. Identifying untrue causes/adverse consequences – find out what would eliminate the problem or suggest options that would have an effect on the situation
iv. Preferred scenario – describe the preferred scenario, what would occur, goal to achieve and people that would be affected based on the situation discussed
v. Planning for future – gather suggestions on how the scenario should be planned, identify resources, timing and people that should or should not be involved.

This research adopted the semi-structured FGD, in that it is found to be more flexible and less restrictive in gaining insights into consumer behaviour on social media. Indeed, the heart of a successful semi-structured FGD lies in the method of questioning.

Content analysis is a technique that analyses qualitative data in the study of recorded human communication. The early study on content analysis was the work of Ida B. Wells in 1981 that looked at newspaper articles on slave parents from 1971 to 1981 (Babbie, 2007). The content analysis is used to analyse the FGD data, which is defined by Cavana et al. (2001) as:

> *'The process of identifying, coding and categorising the primary patterns in the data'*

According to Malhotra (2007) the goal of undertaking content analysis is to decipher, examine and interpret the meaningful patterns or themes that emerge out of the data collected. Malhotra proposed three basic steps for analysing qualitative data, as follows:

i. Data reduction – researcher chooses which aspects of the data are emphasized, minimised or set aside for the project at hand
ii. Data display – researcher develops a visual interpretation of the data with the use of such tools as a diagram, chart or matrix. The display helps to illuminate patterns and interrelationships in the data
iii. Conclusion drawing and verification – researcher considers the meaning of the analysed data and assesses its implications for the research question at hand.

Content analysis allows the themes derived from the research question to emerge from the raw data collected from the FGD, which then helps to describe the main focus of the qualitative analyst. Each theme needs to have a different identity. The raw data is reviewed until a critical point is identified and the review is continued until a distinct second theme emerges. The second theme needs to be contrasted with the first theme in order to ascertain that the two themes are unique. From there on, the content analysis continues until an obvious third theme is found and so forth (Cavana et al., 2001).

The themes need to be compared as the process of constant comparative analysis proceeds, with each newly identified theme weighed against earlier identified themes to ensure that the new theme did sense more light on the phenomenon being investigated. This process involves coding the participants' comments with a concise summary statement that delineates the consumer motivation to use social media. Categories were then weighed against one another to clarify groupings, merge similar categories and reject redundancies.

Several computer packages have been designed to support the content analysis. This research uses Nvivo version 9 software. Nvivo version 9 software is used because it is a complete program compared to other qualitative analysis software.

5.3.2 Quantitative Research – Survey

The second stage of the mixed method approach is survey research, which is the systematic gathering of data from respondents to understand and predict aspects of the population of interest. It also implies that the data is gathered through a questionnaire (Tull & Hawkins, 1987). In the survey research, respondents are required to answer a

range of questions in respect of their behaviour, awareness, attitudes, motivations, intentions, demographics and lifestyle (Malhotra, 2007).

Survey research includes the collection of data from the target population, which is usually known as collecting primary data. It can be used for explanation, description, and hypothesis testing as a guide to action or for analysing the relationships between particular constructs (Burton, 2000). In social sciences, survey research is typically associated with questionnaires and structured interviews.

Survey methods can be categorised according to the mode used to administer the questionnaire. Survey questionnaires may be managed in four major modes: (i) personal interviews, (ii) mail interviews, (iii) telephone interviews, and (iv) electronic interviews via email or through the Internet. The survey method has several advantages (Malhotra, 2007) such as:

i. The questionnaire is easy to manage
ii. The data gathered are trustworthy because the responses are limited to the alternatives stated
iii. The variability in the results that may be caused by differences in interviewers could be reduced due to fixed-response questions
iv. Analysis, coding and interpretation of data obtained are quite straightforward

However, there are some disadvantages of survey research, namely (Malhotra, 2007):

i. Respondents may be incapable or unwilling to give the required information, especially if the information requested is sensitive or private
ii. Structured questions and fixed-response alternatives may affect the validity of particular data, such as feelings and beliefs
iii. Stating the precise words of questions is not simple

iv. Question wording may have a major effect on responses

v. Misunderstandings cannot be detected and corrected

vi. It may not be feasible to check the seriousness or honesty of responses

Notwithstanding the aforementioned, Bryman and Bell (2007) point out that surveys are a suitable and helpful method of gathering data under three conditions:

i. When the research objectives need quantitative data

ii. When the information insight is logically precise and well known to the respondents

iii. When the researcher has substantial previous knowledge of certain problems and the variety of responses likely to come out

Despite the survey disadvantages, criticism and conditions, it is by far the most familiar method of primary data collection in marketing research (Malhotra, 2007). However, there is no fully perfect survey, so the key to a successful questionnaire is the care taken in implementing the time consuming preparatory work (Remenyi & Williams, 1998).

5.3.2.1 Sampling Design

Sampling is a crucial method for increasing the validity of the collected data and ensuring that the sample is representative of a population. It is a procedure that uses a small number of units of a given population as a basis for drawing conclusions about the whole population (Cavana et al., 2001; Zikmund, 2003). Execution of the sampling process requires a detailed specification of how the sampling design decisions should be

made with respect to the population, sampling frame, sampling unit, sampling technique and sample size (Malhotra, 2007).

Cavana et al. (2001) stress that the reason for sampling is that it saves time, cost and human resources. Studying the sample rather than the entire population leads to more reliable results because fatigue is reduced, resulting in fewer errors in collecting data, especially when the elements involve a large number.

Attributes or characteristics in the population are generally normally distributed. The sample has to be chosen in such a way that the distribution of the characteristics of interest follows the same type of normal distribution in the sample as it does in the population. The more representative the sample is of the population, the more generalizable are the findings of the research (Malhotra, 2007).

According to Cavana et al. (2001), there are two types of sampling: (i) non-probability and (ii) probability sampling. In non-probability sampling, the representatives do not have a known or predetermined chance of being selected as subjects whereas probability sampling is used when the representativeness of the sample is of importance in the interest of wider generalisability. Each of these sampling methods has different strategies, where, for qualitative, as discussed earlier, non-probability sampling was applied; however, for the quantitative research, this research opts for probability sampling. It is important for the quantitative stage to use probability sampling because of the need for highly accurate estimates of the target population in order to test the research framework and its hypotheses.

Malhotra (2007) explains that there are four general types of probability sampling: (i) simple random sampling, (ii) systematic sampling, (iii) stratified sampling, and (iv) cluster sampling. Among these probability sampling methods, this research uses stratified sampling because of conducting this research specifically on social media users. Stratified sampling is defined by Malhotra (2007, p384) as:

> *A probability sampling technique that uses a two-step process to partition the population into sub-populations or strata. Elements are selected from each stratum by a random procedure*

Malhotra (2007) adds that the variables used to partition the population into strata are referred to as stratification variables. The criteria for the selection of these variables consist of (i) homogeneity, (ii) heterogeneity, (iii) relatedness, and (iv) cost. The elements within a stratum should be as homogeneous as possible, while the elements in different strata should be as heterogeneous as possible. The stratification variables should also be closely related to the characteristics of interest. The more closely these criteria are met, the greater the effectiveness in controlling the extraneous sampling variation. The best number of strata should not be more than six as anything beyond this number will affect the sampling precision.

From the stratified sampling, the stratified variables identified were then sampled using simple random sampling. Simple random sampling is defined as:

> *Technique in which each element on the population has a known and equal probability of selection. Every element is selected independently of every other element and the sample is drawn by a random procedure from a sampling frame (Malhotra, 2007, p382)*

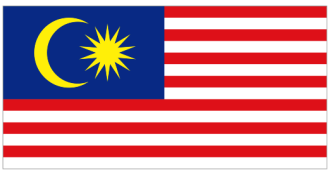
Simple random sampling is used when the elements in the population have specific characteristics or knowledge, but they are very difficult to locate and contact. ***This***

allows statistical inferences on the chosen sample to be made in this research. The selected respondents could represent the total population of social media users, and this approach also permits generalisation.

5.3.2.2 Sampling Frame – Social Networking Sites

With regards to the nature of the research, the best way to reach the target population and to ensure the accurate representation and generalisation of social media users is by using an online survey. Noting that the information technology moves so fast, it enables the survey research to be undertaken online at ease.

Malhotra (2007) explains that an online survey offers many advantages compared to a traditional survey. Online surveys incorporate automatic skip patterns, consistency checks and other intelligent features. The data collection is fast and inexpensive. In terms of sampling strategy, an online survey is meaningful. It takes into consideration the nature of this research and its target population, which is online users, thus, online sampling was adopted.



Total Facebook Users	:	12,819,280
Position in the World	:	18
Penetration of Population	:	49%
Penetration of Online Population	:	75.8%

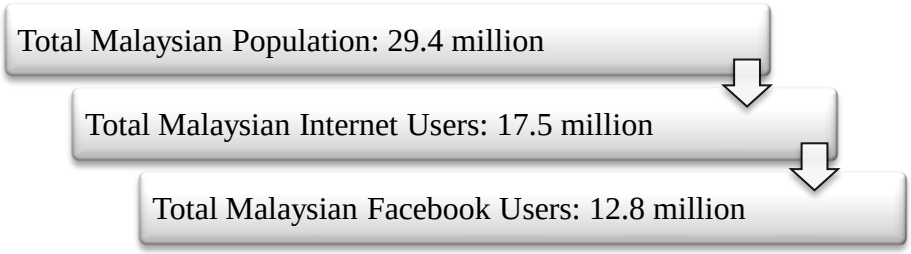
(Source: Socialbakers, 2012)

Figure 5.5: Malaysian Online Population Statistics Year 2011

Moreover, because the online users that are targeted in this survey must be social media users, the best place to run this online survey is through social networking sites. Figure 5.5 shows the Malaysian online population statistics for 2011. These statistics are used to justify the selection of the sampling frame and the underlying reason for the usage of online survey research.

According to Bhutta (2012), Facebook is currently the best suited social networking site for this type of research because of its size, which currently exceeds 845 million users worldwide. Facebook was designed to connect people, friends, family, acquaintances, co-workers, marketers and brands. Each Facebook user is directly linked to his or her personal friends, while having access to membership in one or more of the millions of Facebook groups that connect other users throughout the world. Facebook groups are virtual communities linking people with shared interests, attributes or causes. Researchers can readily sample populations of interest by working through existing groups or creating new ones.

Therefore, Internet sampling for this research is done through the social networking site via Facebook, as explained in Figure 5.6.



(Source: Socialbakers, 2012)

Figure 5.6: Statistics for Malaysian Facebook Users for 2011

Based on the total Malaysian Facebook users, as depicted in Figure 5.6, stratified random sampling was then applied (Cavana et al., 2001). Stratified random was done by dividing Malaysian Facebook users into six strata based on six criteria in accordance with Socialbakers (2012). From these six strata, which were stratified into brand page, celebrity page, entertainment page, media page, sports page and place page, the link to the online survey research was posted on the top five sites from each of these strata. Figure 5.7 explains the process.

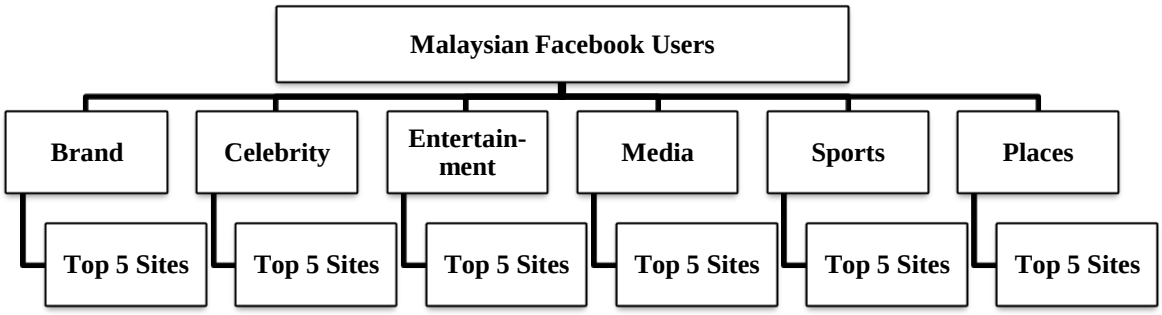


Figure 5.8: Stratified Random Sampling for Malaysian Facebook Users

5.3.2.3 Sample Size

In research, the theoretical framework has several variables of interest, and the question arises concerning the appropriate sample size when all the factors are taken into account. Sampling design and sample size are important to establish the representativeness of the sample for generalisability. Sampling decisions should consider both the sampling design and sampling size due to the fact that too large a sampling size could become a problem through committing a Type II error. A Type II error happens when the findings are accepted where in actual fact they are supposed to be rejected. Also, with too large a sample size, a weak relationship can turn out to be significantly correlated and lead to the belief that the significant relationship found is true of the population, when in fact it may not be (Cavana et al., 2001). Therefore, too

large or too small a sample will cause generalisation problems if selecting the sample size is not done properly.

The required sampling size relies on factors, such as the proposed data analysis techniques (Malhotra, 2007). One of the proposed data analysis techniques for this research is factor analysis, which is sensitive to sample size and less steady when estimated from small samples (Tabachnick & Fidell, 2007). However, despite the data analysis technique, which works as one of the requirements to choose a suitable sample size, the general guidelines are proposed. Cavana et al. (2001) indicates a rule of thumb for determining the sample size, as follows:

i. Sample sizes larger than 30 and smaller than 500 are appropriate for most research
ii. Samples are to be broken into subsamples, thus a minimum sample size of 30 for each category is usually necessary
iii. In multivariate research, the sample size should be several times (preferably ten times or more) as large as the number of variables in the study

From another perspective, Hair et al. (2010) suggest that the minimum sample size is 100 when considering models containing five or fewer constructs, each with more than three items with high item communalities (0.6 or higher); 150 when models contain seven or fewer constructs and modest communalities (0.5); 300 when models contain seven or fewer constructs and low communalities (0.45), and/or multiple under identified (fewer than three items) constructs; and 500 when models contain a large number of constructs, some with lower communalities, and/or having fewer than three measured items. This suggestion provides a rough idea about the sample size for this

study. It is generally regarded that 100 is the practical minimum size. In addition, Cliff (1987) recommends a sample size of 150 for 40 variables (item statements) in a scale.

A priori statistical power analysis can be calculated using various heuristics. According to Pallant (2005) sample size should be at least five times the number of indicators. Since the proposed model has five latent variables with 15 manifest variables involving 134 indicators, 44 for PERSONAL, 11 for SOCIAL and 47 for TENSION, and one mediating variable INNO involves 27 indicators. Thus, there are 134 indicators (134 x 5 = 670), which means that 670 is the required sample size if Pallant's (2005) technique is employed.

On the other hand, in Cavana et al. (2001), it is explained that the decision on a simplified sample size is done using the table proposed by Cohen (1969), and Krejcie and Morgan (1970). The table provides generalised scientific guidelines for sample size decisions. According to this table if a population size is greater than 1,000,000, the sample size should be at 384.

Another alternative method states that when using the technique of partial least squares (PLS), as applied in this research, the sample size is independent of the number of indicators (Chin, Marcolin & Newsted, 2003). This method requires ten times the construct with the largest number of structural paths, which would be from the 15 exogenous variables. This method indicates 10 x 15 = 150 as an adequate sample size. As this research utilises PLS, the method proposed by Chin et al. (2003), Cohen (1969), Krejcie and Morgan (1970), and Pallant (2005), the usable sample size of 428 exceeds the sample size of 150, as proposed by Cohen (1969), and Krejcie and Morgan (1970), and is within 670 as proposed by Pallant (2005), which is deemed adequate.

Accordingly, an appropriate sampling design process for the qualitative stage in order to gain valuable insights into the consumer behaviour of social media is summarised in Table 5.4.

Table 5.4: Summary of Qualitative Stage Sampling Design

Target Population	:	Malaysian Internet Users
Sampling Frame	:	Social Media Users
Sampling Technique	:	Stratified sampling as initial group then followed by snowballing sampling
Sample Size	:	Minimum of 384 (Krejcie & Morgan, 1970)
Actual Sample	:	428

5.3.2.4 Instrumentation – Web-Based Questionnaires

In the late 1990s, additional approaches to data collection using the Internet were introduced including Web-based data entry and direct mailing of online questionnaires, which is widely used in the marketing and psychological research (Swoboda, Mühlberger, Weitkunat & Schneewei, 1997; Van Gelder, Bretveld & Roeleveld, 2010).

According to Bech and Kristensen (2009), and van Gelder et al. (2010), data collection using Web-based questionnaires generally improves data quality since validation checks can be incorporated with prompts that alert respondents when they enter implausible or incomplete answers. Even without forced-choice formats, item non-response and 'don't know/not sure' answers are reported to be less prevalent in Web-based questionnaires compared to traditional ones. Göritz and Birnbaum (2005) support that Web-based questionnaires improve data quality because when data are entered electronically, they are automatically transformed into an analysable format by common gateway interface (CGI) scripts. Errors in the process of data entry and coding are avoided. CGI scripts

also help to build skip patterns to hide non-relevant follow-up questions, order questions randomly, give personalised feedback and randomise participants to different versions of the questionnaire. Visual and audio aids and pop-up windows providing additional information can be added to simplify responding, which is impossible to achieve in traditional questionnaire methods.

Also, Wyatt (2000) explains that Web-based questionnaires are returned more rapidly with most respondents completing the questionnaire within a few days. In addition, Web-based questionnaire adjustment can be done to resolve unforeseen problems or to incorporate preliminary results. The advancement of technology also helps in collecting paradata or metadata automatically including date, time, and time of completion, which provides useful insights into the answering process.

The current developments in the use of Web-based questionnaires as a mode of data collection, especially in consumer and social media research, is promising because of the nature of the respondents that have great engagement with technology. For this research, a structured questionnaire is used as the main tool to collect data in the second stage of field research for this research. This research applied the encouragement technique to increase the response rate by giving rewards in terms of a lucky draw for the ten lucky respondents. It is also aimed to reduce the failure of respondents to answer some items in the questionnaire by giving out clear instructions concerning how the questions should be answered. In addition, the design of the questionnaire is attractive to encourage the respondents to complete the questionnaire (Wyatt, 2000).

This research uses survey monkey (http://www.surveymonkey.com/), a web-based survey solution that runs online survey software to conduct the online survey research.

Survey monkey offers 17 formats for web-based questionnaire design including multiple choice, true and false, and open-ended questions. The Survey Monkey web-based survey site enables one to track respondents, re-contact the non-responsive respondents and also avoid pestering those who have already participated. It allows the data collection to generate frequencies for each question and export data into statistical programs for more complex analysis. After the design of the web-based questionnaire is completed, it gives a link to the survey, which is posted on the Facebook page, as discussed in Section 5.3.2.2. The link to this survey is at http://www.surveymonkey.com/s/mysocialmedia. The snapshot of this survey link as appeared in Facebook is depicted in Figure 5.8.

Figure 5.8: Snapshot of Facebook Online Survey Link for Survey Invitation

Table 5.5: Summary of Research Instrumentation Design

	Section A	Section B	Section C
Theme	▪ Social Media Usage Trend	▪ Consumer Motivation to Use Social Media	▪ Respondent Demographic
Number of Questions	▪ 9 questions	▪ 6 main questions	▪ 8 questions
Scale of Measurement	▪ Nominal Scale ▪ Interval Scale	▪ Interval Scale	▪ Nominal Scale
Type of Scale	▪ Categorical ▪ Rating	▪ Likert Scale ▪ Semantic Differential Scale	▪ Categorical

The web-based questionnaire consists of three parts where Section A is built to understand the consumer usage trend of social media, Section B is designed to understand consumer motivation to use social media and Section C is built to analyse the respondent's demographics. Table 5.5 explains the instrumentation design.

5.3.2.5 Scaling Technique

This research adopted the non-comparative scaling technique, also referred to as monadic scales, in which one object is evaluated at a time. According to Malhotra (2007), non-comparative techniques consist of two types: (i) continuous and (ii) itemised rating scales. Non-comparative itemised rating scales can be modified and can take many different forms.

For non-comparative itemised rating scales, traditional guidelines suggest that an appropriate number of categories should be seven plus or minus two, which is between five and nine. Also, the number of categories determine the analysis of the data because the size of the coefficient correlation when measuring the relationship between the variables will be influenced by the number of scale categories (Cavana et al., 2001; Zikmund, 2003; Malhotra, 2007). For research in the area of marketing, itemised rating scales is the most usable one.

As can be seen in Table 5.5, the heart of the questionnaire falls in Section B in which the constructs are tested. It uses a Likert scale and semantic differential scale. According to Malhotra (2007), Likert scale is a widely used rating scale that requires the respondents to indicate the degree of agreement with each of a series of statements about the stimulus objects. The data are treated as an interval, where the

scale possesses the characteristics of description, order and distance. A five-point Likert scale ranging from strongly agree to strongly disagree is widely used in marketing research. Examples from the questionnaire are illustrated in Figure 5.9.

	Strongly Disagree	*Disagree*	*Neither Disagree nor Agree*	*Agree*	*Strongly Agree*
Social media enables conversation					
I express myself freely in social media					

Figure 5.9: Example of Research Instrumentation Using Five-Point Likert Scale

In addition, this research instrumentation also uses a semantic differential scale. Cavana et al. (2001) explain that a semantic differential scale is associated with bipolar attributes that have semantic meaning. Bipolar attributes are identified at the extremes of the scale and respondents are asked to indicate their attitude, which is called semantic space. The bipolar adjectives are used. The semantic differential scale is treated as an interval scale. Examples from the questionnaire are illustrated in Figure 5.10.

Entertaining	:__:	:__:	:__:	:__:	:__:	Dull
Happy	:__:	:__:	:__:	:__:	:__:	Sad
Useful	:__:	:__:	:__:	:__:	:__:	Useless

Figure 5.10: Example of Research Instrumentation Using Semantic Differential Scale

5.3.2.6 Research Construct Development

As explained in Chapter Four, the theoretical definition of each construct used in this research states the meaning of the central idea of this research interest. The construct was operationalised in a way that is consistent with the theoretical definition. This operational definition specifies which observable characteristics are to be measured and the process of assigning value to the construct. According to Malhotra (2007, p316), a construct is defined as:

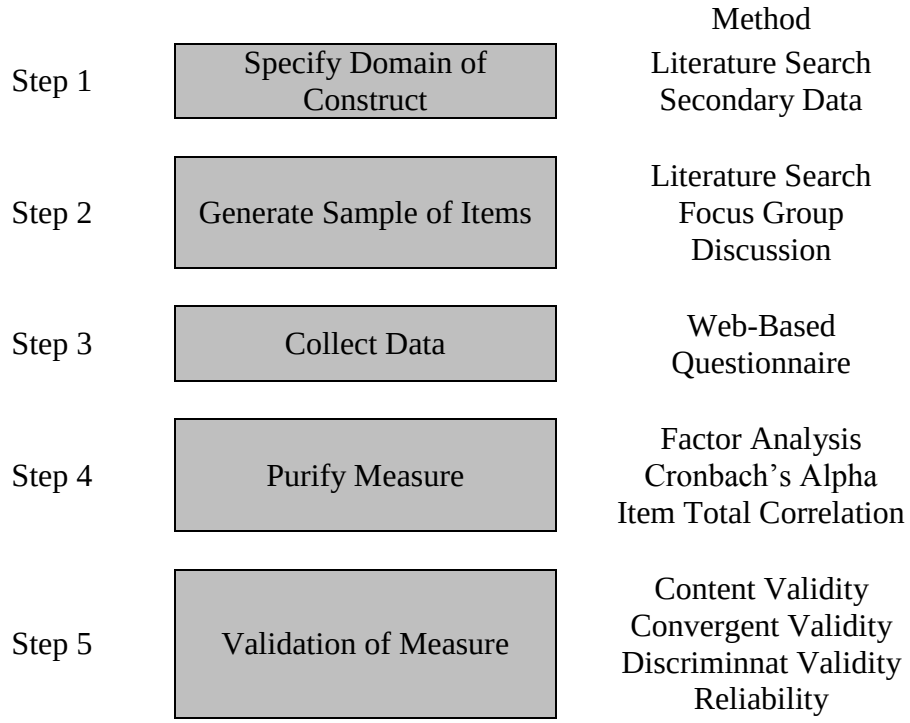
> *A specific type of concept that exists at a higher label of abstraction than do everyday concepts.*

In Churchill's (1979) influential article, he advocated a construct development approach for empirical studies in marketing. He stresses that complex constructs cannot be measured with a single item because each measure has an idiosyncratic error and will not give a reliable measure. Rather it is better to work with multiple measures. This allows research to separate the relationships between various constructs from measurement errors. Based on this, and due to the lack of consensus on valid scales in the area of consumer adoption of social media, some new measures were developed based on the input received during the FGD stage.

Developing a research construct requires considerable technical expertise. This research follows the construct development sequence suggested by Churchill (1979). The measurement items of 15 latent variables were established from literature based on empirical studies. Figure 5.11 shows the suggested procedure for developing the research constructs. The descriptions on the right side of the box indicate the method undertaken by the present study for each step. Steps 1 to 3 were explained in detail in

the previous section of data collection techniques, while Steps 4 and 5 are elaborated upon in the subsequent sections.

According to Churchill (1979), the suggested procedure for developing a scale begins with specifying the domain of the construct and the underlying theory of the construct being measured. A theory is essential not only for constructing the scale but also for interpreting the resulting score later in the data analysis section in Chapter Six. Therefore, what is included in the construct and what is excluded should initially be investigated. In this stage, determining the domain is applied by conducting a thorough review of the literature in which the variable is used and should present a detailed statement of the reasons and evidence, as explained in Chapters Three and Four.



(Source: Churchill, 1979)

Figure 5.11: Procedure for Developing Research Constructs

After the domain of the construct was specified, the items were generated to capture the domain. This was based on exploratory research including literature searches and focus groups. The literature specifies how the variable has been defined previously and how many dimensions or components it has. The focus group discussions were used in favour of the item-generation stage. Potential indicators for the measures were identified by looking for items commonly used in prior measurement models and by integrating the results of the discussions. This, which is considered as the early stage of item generation, was used to focus on developing a set of items that capture each and every one of the dimensions of the constructs in this matter.

Near the end of the item development stage, the focus shifted to editing the item. Each statement was reviewed so that the formulated words were as accurate as possible, as well as to determine how well the items tapped the underlying constructs. After the gathered items were carefully edited, the items generated from the FGD and past literature were submitted to a panel of experts consisting of knowledgeable individuals for judgment.

The basic research design as well as the definition of each construct and the list of items were explained to the participants, who consisted of nine fellow academicians. They were asked to comment and correct the constructs as well as assign individual items to what they believed to be the correct construct. This panel of experts helped to refine the items for content validity process. None of the items proposed were dropped, which means all of the items were used in the pre-testing and pilot testing.

Table 5.6: Summary of Reliability and Validity Process Undertaken During the Research Construct Development

Process	*Details*
Reliability How consistently a measuring instrument measures a concept?	Using internal-consistency and inter-item consistency with Cronbach's Alpha > 0.70 (Nunnally & Bernstein (1994)
Face Validity Does the sample of respondents validate that items are clear and understandable?	A social media user from: ▪ 5 undergraduate students of University of Malaya ▪ 5 postgraduate students of University of Malaya
Content Validity Does the measure adequately measure the concept as based on the relevant literature, previous research or the opinion of experts?	Scholars and Experts in the field of Consumer Behaviour, Marketing and E-Marketing, Sociology, Communication and Media, and Psychology ▪ 2 from Malaysian Universities ▪ 7 from International Universities
Construct Development Period	3 months

From the feedback received, the questionnaire was designed and administered to ten social media users for the face validity process. Table 5.6 summarises the reliability and validity process undertaken during the research construct development stage. Data were then collected. Here, further reduction techniques were applied in a quantitative manner. Data were collected on the reduced set of potential scale items from a pre-test sample of respondents.

In order to test for reliability and construct validity, as proposed by Churchill (1979), the data collected were analysed using coefficient alpha and factor analysis. The Cronbach's alpha value was used in this early stage to purify the measures, as well as to assess and re-assess the reliability and validity. The component was accepted if the Cronbach's Alpha value is greater than the 0.70 threshold recommended by Nunnally & Bernstein (1994). In order to gain the highest possible reliability coefficient, the components were purified by dropping items with the lowest item-to-total correlation.

Table 5.7: Summary of the Purification of Measurement

Measurement Items	*Original Items**	*First Purification***	*Second Purification****
PERSONAL NEEDS			
Trendiness	5	7	6
Enjoyment	14	14	9
Entertainment	5	5	8
Interactivity	20	20	8
SOCIAL NEEDS			
Social Influence	4	8	7
Social Interaction	7	8	7
TENSION RELEASE NEEDS			
Companionship	17	19	9
Belongingness	16	16	9
Playfulness	9	9	8
Escapism	5	5	8
INNOVATION CHARACTERISTICS			
Relative Advantage	7	7	5
Compatibility	5	5	5
Complexity	5	5	5
Trialability	5	5	5
Observability	5	5	5
SOCIAL MEDIA ADOPTION			
Adoption	5	8	8
TOTAL	***134***	***146***	***112***

** Original items derived from literature and construct development*
*** Second purification consists of item that has been added or reduced from FGD*
**** Third purification consists of items that have been added or reduced from pre-test and pilot test that are used for actual data collection*

Once a satisfactory Cronbach's Alpha coefficient was achieved, the analysis moved on to the next stage of instrumentation design. As a result, this research used 112 useable, reliable and validated items to be tested in actual analysis. Table 5.7 explains the purification of measurement items based on latent variables of the research.

Table 5.8: Sources of Measurement Items

Variable	*Source of Measurement Items*
Trendiness	Boyd & Mason (1999); Chryssochoidis & Wong (2000); Van Rijnsoever & Donders (2009)
Enjoyment	Lin, Gregor & Ewing (2008)
Entertainment	Ducoffe (1996), Chen et al. (2002)
Interactivity	Song & Zinkhan (2008)
Social Influence	Fishbein & Ajzen (1975); Davis (1989); Venkatesh et al. (2003)
Social Interaction	Sun et al. (2008); Haridakis & Hanson (2009)
Companionship	Foster et al. (2010); Parker & Plank (2000)
Belongingness	Lee & Robbins (1995)
Playfulness	Moon and Kim (2001), Lin, Wu, and Tsai (2005) Sledgianowski and Kulviwat (2009)
Escapism	Parker & Plank (2000)
Relative Advantage	Moore & Benbasat (1991); Rogers (2003); Van Ittersum & Feinberg (2010)
Compatibility	Moore & Benbasat (1991); Rogers (2003); Van Ittersum & Feinberg (2010)
Complexity	Rogers (2003); Van Ittersum & Feinberg (2010)
Trialability	Moore & Benbasat (1991); Rogers (2003); Van Ittersum & Feinberg (2010)
Observability	Rogers (2003); Van Ittersum & Feinberg (2010)
Adoption	Srinivasan et al. (2002)

As discussed in Chapter Four, the theoretical model of this study was designed to empirically test the structural relationships among the four exogenous constructs – PERSONAL, SOCIAL, TENSION and INNO – and one endogenous construct, that is, ADOPT. In this model, the exogenous construct is considered as a predictor for the other constructs in the model whereas the endogenous construct is the dependent or outcome construct in the structural model (Hair et al., 2010). The measures of this

study were adapted from established scales from prior established studies, which are explained in Table 5.8.

5.3.2.7 Research Construct Reliability and Validity

The precise measurement of hypotheses or theoretical constructs is usually the fundamental issue in many areas of research, whenever variables are difficult to observe. In this section, the steps taken to establish the reliability and validity of the instrument are discussed. The use of instruments is needed to ensure accurate results that explain the instrument used in the research, measure the variables they are supposed to measure and measure them correctly, which, in turn, enhances the scientific quality of the research (Churchill & Iacobucci, 2004).

Generally, in order for a construct to measure effectively and accurately, the reliability and validity of the construct needs to be met. Reliability tests how consistently a measuring instrument measures a particular concept while validity tests how well an instrument measures the particular concept it is supposed to measure (Cavana et al., 2001).

Reliability or internal consistency of measures indicates the homogeneity of the items in the measurement set. The item should stick together as one set and be capable of independently measuring the same concept so that the respondents attach the same overall meaning to each of the items. The assessment of scale reliability is based on the correlations between the individual items or measurements that make up the scale, relative to the variances of the items (Cavana et al., 2001; Malhotra, 2007).

Scale reliability is considered as the proportion of variance attributed to the true score of the latent construct. Latent constructs are usually measured by internal consistency reliability, which indicates the homogeneity of items comprising a measurement scale. Internal consistency is the extent to which tests or procedures assess the same characteristics, skill or quality by measuring the inter-item correlation. High inter-item correlation indicates that the items of the scale have strong relationships to the latent construct and are possibly measuring the same thing (Hair et al., 2010).

Another indicator that is commonly used to assess reliability is Cronbach's alpha coefficient. It has been proposed as the most appropriate means of assessing reliability in marketing research (Malhotra, 2007). Nunnally (1978) indicated 0.70 as being an acceptable reliability coefficient but lower thresholds are sometimes used in the literature. However, if the scale has a coefficient alpha below 0.70, the scale should be examined for any sources of errors, such as inadequate sampling of items, administration errors, situational factors, sample characteristics, number of items, and theoretical errors in developing the measurement scale. Other methods to assess the reliability of constructs are through a composite reliability and variance extracted, which is further explained in Section 5.5.2.1.

While reliability is concerned with the accuracy of the measuring instrument, validity is associated with whether a particular construct is the underlying cause of item covariation (Cavana et al., 2001; Malhotra, 2007). Validity usually refers to the extent to which the measurement items or indicators measure what they are supposed to measure (Hair et al., 2010). Several types of validity test are used to test the goodness of measures. For this research, two important validities are looked at – content validity and construct validity.

Content validity involves the assessment of the degree to which a measure correctly measures its targeted variable. Content validity is made up of construct validity. It is concerned with sample-population representativeness; for instance, the knowledge and skills covered by the test items should be representative of larger domain knowledge and skills. Bias generated by an unrepresentative instrument will carry over into uncertain results. As a result, there is no easy way to determine content validity aside from expert opinion. In this study, content validity is established through the literature review and through expert judgment (Cavana et al., 2001; Malhotra, 2007; Hair et al., 2010). The process applied is explained in Section 5.3.2.6.

Construct validity deals with the adequacy of a scale as a measure of a specific variable. It seeks agreement between a theoretical concept and a specific measuring device or procedure. Construct validity can be sub-categorised into two: (i) convergent validity and (ii) discriminant validity. To achieve construct validity, all of these components must be satisfied. Convergent validity refers to the state when items measure their intended construct and no other construct, whereas discriminant validity is confirmed when the construct as a whole differs from the other constructs (O'Leary-Kelly & Robert, 1998; Chen & Paulraj, 2004; Hair et al., 2010). Detailed descriptions of the two forms are as follows:

i. Convergent Validity

Convergent validity is the degree to which a measure relates to other characteristics that are conceptually similar to what it is supposed to assess. It is the actual general agreement among ratings, gathered independently or one another, where measures should be theoretically related. The convergent validity test is to determine if the scale items load together on a single construct in the model. An item has convergent validity

if it has a high correlation with another item that measures the same construct. Item-to-total correlation is commonly used to assess convergent validity (O'Leary-Kelly & Robert, 1998; Chen & Paulraj, 2004; Hair et al., 2010).

Accordingly, measurement constructs for this research are validated in two stages. First, the measurement items are refined and validated using the most commonly used classical approach via factor analysis, then in the second stage of SEM analysis, the constructs will again be validated using PLS analysis. The results are reported in Chapter Six.

ii. Discriminant Validity

The discriminant validity indicates the extent to which a given construct differs from other constructs. It refers to a measure of the indicators of dissimilar constructs that theoretically and empirically should not be related to each other (Hair et al., 2010). Discriminant validity can be measured using factor analysis, SEM and also from Average Variance Extracted (AVE). AVE measures the percentage of variance captured by a construct by showing a ratio of the sum of the variance captured by the construct and its measurement variance (Gefen, Straub & Boudreau, 2000).

Discriminant validity can be evaluated by comparing the AVE values associated with each construct to the correlations among constructs. In order to claim discriminant validity, the square root of the AVE should be larger than any of the correlations among the constructs (Hair, Ringle & Sarstedt, 2011). The results of the discriminant validity are presented in Chapter Six.

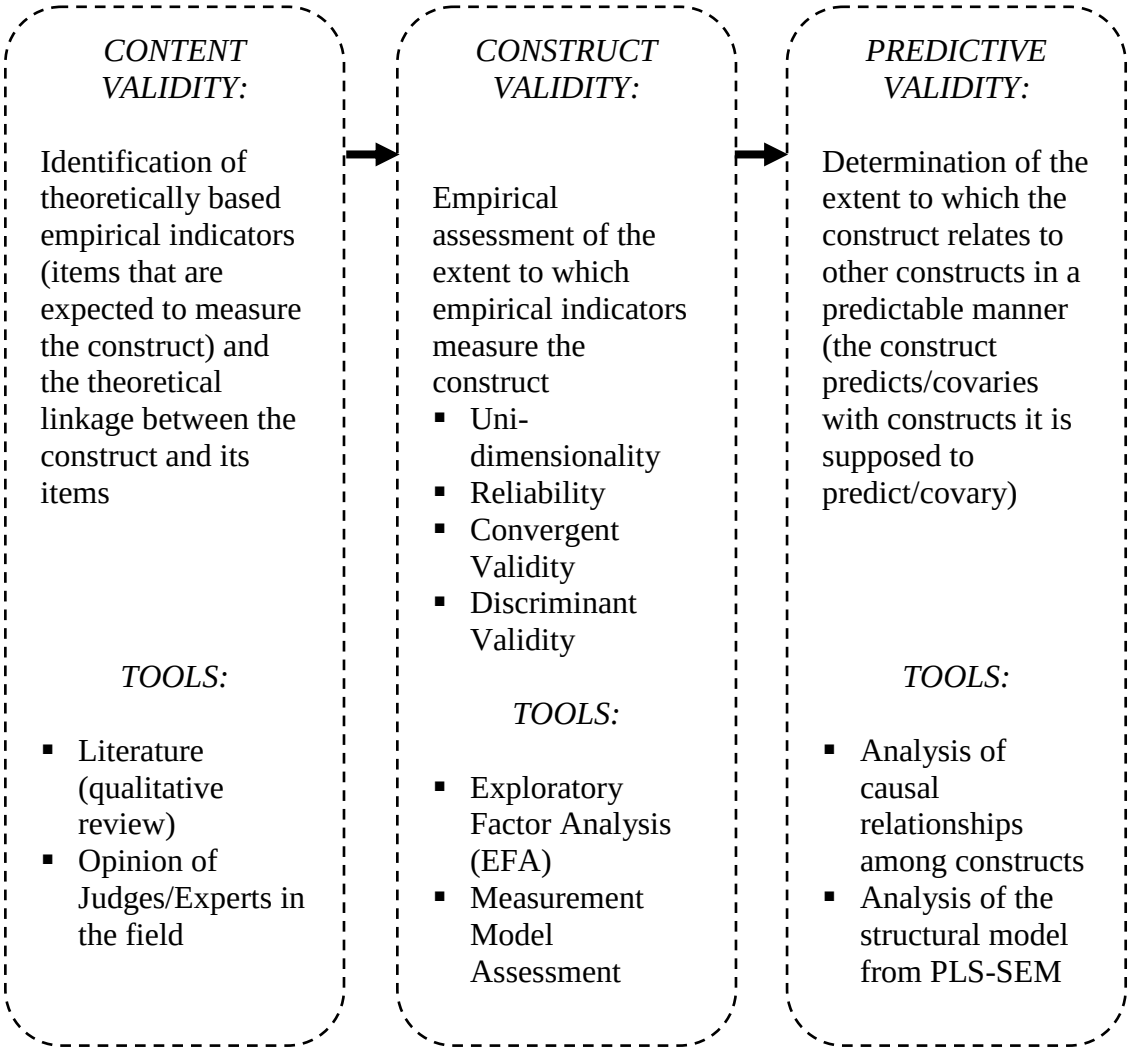


Figure 5.12: Summary of the Validation Process and the Corresponding Procedures

These stages and the relevant testing tools are presented in Figure 5.12. The process, as seen, starts with the establishment of content validity. Construct validity then begins with testing for internal consistency, and unidimensionality. Only after the construct has been proven to be unidimensional and reliable, then convergent validity, discriminant validity and nomological/predictive validity can be tested. Figure 5.12 provides a summary of the steps of the validation process and their corresponding procedures.

Validity plays an important role in maintaining the rigour of the research. In this research, the requirement is planned to be extended to all study constructs, as the need to maintain the rigour of the research important.

5.4 Statistical Analysis Strategy

The selection of an appropriate statistical analysis technique is the most difficult part of the research process. Kinnear and Taylor (1991) suggest three basic guidelines in an attempt to identify the appropriate statistical technique to adopt:

i. How many variables are to be analysed at the same time?
ii. Does the researcher want to address description or inference questions?
iii. What level of measurement (nominal, ordinal and interval) of the variable of interest is available?

The statistical analysis plan is discussed herein. Generally, if one variable is to be analysed at a time, this is known as univariate data analysis, whereas if a relationship between two variables is investigated, it is known as bivariate data analysis (Malhotra, 2007). In the current research, a combination of the above statistical analysis is employed. Various data analysis techniques are listed in Table 5.9, which exhibits a summary of the statistical techniques employed for the data analysis, where detailed explanations of each method of analysis are presented in the following sections.

The analysis of the survey data is planned to involve all of the techniques and procedures described above. The statistical software that is used to run this analysis is SPSS 18 and SmartPLS. An explanation of these techniques and procedures is provided in the following sub-sections.

Table 5.9: List of Procedures and Techniques Employed for Quantitative Analysis

Stage	*Type of Analysis*	*Techniques*
Univariate	Descriptive Analysis	▪ Percentage Frequency Scores ▪ Central Tendency (Mean) ▪ Dispersion (Standard Deviation)
Bivariate	Descriptive Analysis	▪ Cross Tabulation
Multivariate	Multivariate Assumptions	▪ Normality Test: Kurtosis and Skewness ▪ Correlations and Linearity: Pearson Product Moment Correlation, P-P Plot, Variance Inflating Factor (VIF), Tolerance and Condition Index
	Dimensions Reduction and Purification	▪ Factor Analysis: Kaiser-Meyer-Olkin (KMO) Index, Bartlett's Test of Sphericity, Variance Extracted, Internal Consistency, Eigenvalues
	Assessment of Measurement Model	▪ Scale Reliability: Composite Reliability ▪ Convergent Validity: Average Variance Extracted (AVE) ▪ Discriminant Validity: Correlation and Square Root of Average Variance Extracted
	Assessment of Structural Model	▪ Goodness of Fit (GoF), Path Coefficient, T-Value, R Squared (R^2), Explained Variance, Cronbach's Alpha, Communality Coefficient and Redundancy Coefficient
	Test on Effect of Mediator	▪ Comparison of GoF, Cross Validation (CV) Communality and Redundancy and R Squared

5.4.1 Procedures for Descriptive Statistics Analysis

The descriptive statistical data analysis method is used to analyse the demographics and social media trend. Discussion on the respondents' profiles include age, marital status, profession, education, income, ethnicity and location. The type and nature of data is non-parametric. Frequency distribution, mean score, standard deviation and cross tabulation are used to identify differences and to see the trend in social media usage in Malaysia.

Percentage frequency scores distribution is employed to see the number of times various phenomena occur, from which the percentage and cumulative percentage of any occurrence is calculated. Although frequency distribution describes one variable at a time, cross tabulation describes two or more variables simultaneously. This bivariate analysis aims to identify whether there are differences between the demographic background and social media usage in which one variable, that is, demographics, to another variable, that is, the usage of social media, are tabulated and any trend identified.

Meanwhile, the mean scores and standard deviation are used to describe a series of observations in a data set in a summarised way or the average. By calculating means, it provides an idea or a feel for the basic characteristics of the data. The mean (μ) is used to measure the central tendency that offers a general picture of the data without necessarily inundating one with each of the observations in a data set. The formula used to calculate the mean is as follows:

$$\overline{X} = \frac{(\sum_{i=1}^{n} X_i)}{n}$$

In addition, standard deviation (σ) is used as a measure of dispersion as an indication of the spread of a distribution of the variability in the data.

$$s = \frac{\sum_{i=1}^{n} (X_i - \overline{X})^2}{n-1}$$

5.4.2 Procedure for Testing the Normality of the Data Set

Normality being the fundamental assumption in data analysis refers to the shape of the data distribution for an individual metric and its correspondence to the normal

distribution. Hair et al. (2010) term normality as the benchmark for statistical methods. The variation from the normal distribution needs to be small. For large variations, this renders all statistical tests resulting from the analysis invalid. There are several ways to describe the distribution, if it differs from the normal distribution. Two shape descriptors, skewness and kurtosis, are among the most popular approaches in describing the shapes, or distribution of a data set.

Skewness looks at the distribution balance, whether it is centred or symmetric or it shifts left or right. It measures the symmetry of a distribution, in which skewness values falling outside the range of -1 to +1 indicate a substantially skewed distribution (Hair et al., 2010). Kurtosis, which is a measure of peakedness, or the flatness of a distribution is used to compare the normal distribution within the recommended range of -2.0 to +2.0 (Coakes & Steed, 2003). The higher the positive value indicates the higher the peak and vice versa. A distribution is said to be normal when the values of skewness and kurtosis are equal to zero (Tabachnick & Fidell, 2007). The recommended range of skewness and kurtosis values is explained in Table 5.10.

Table 5.10: Range of Skewness and Kurtosis Values

Condition	Requirements	References
Skewness	-1 to +1	Hair et al. (2010)
Kurtosis	-2.0 to +2.0	Coakes & Steed (2003)

5.4.3 Procedure for Checking Correlations and Linearity

Correlation is one of the statistical techniques used to explore the relationship between variables. The technique is used when there is a need to describe the strength and

direction of a relationship between two variables (Pallant, 2005). The strength and direction of the relationship is provided by the statistics known as the Pearson's product moment correlation, *r*, which is used to check for statistical significance. Its value should range between +1 and -1, where an extreme value indicates perfect relationship in the corresponding direction and 0 indicates no relationship. According to Pallant (2005), different guidelines on the interpretation of *r* have been provided by different authors, for example, Tabachnick & Fidell (2007), and Cohen (1988) suggest that $0.10 \leq r \leq 0.29$ or $-0.10 \geq r \geq -0.29$ represent small strength; $0.30 \leq r \leq 0.49$ or $-0.30 \geq r \geq -0.49$ represent medium strength, and $0.50 \leq r \leq 1.0$ or $-0.50 \geq r \geq -1.0$ represent large strength.

Table 5.11: Requirement for Multivariate Assumption

Condition	Requirements	References
Outliers	No outliers accepted	Hair et al. (2010)
Correlations	Pearson's product moment correlation range between +1 and -1	Cavana et al. (2001); Hair et al. (2010); Malhotra (2007)
Linearity	P-P Plot should be close to ideal line	Hair et al. (2010), Tabachnick & Fidell (2007)
Multicollinearity	If VIF >10 If Tolerance <.0.1 If Condition Index >30	Field (2009); Pallant (2005)

For the checking of linearity, which explains the linear relationship of variables, Hair et al. (2010) suggest the use of P-P plots to check the relationship. The plotted points need to be close to the ideal line for linearity to exist. The issue of multicollinearity that explain the degree to which a variable's effects can be predicted, or accounted for, by the other variables in the analysis, is checked using the variance inflating factor (VIF), tolerance and condition index. Table 5.11 presents the summary of these assumptions.

5.4.4 Procedures for Reduction of Dimensions

Factor analysis refers to a set of multivariate statistical techniques that are used to explore, or confirm the underlying structure among a set of items that determine the items tap a factor, or latent construct (Hair et al., 2010). The technique condenses a large set of variables or scale items down to a smaller, more manageable number of dimensions or factors (Pallant, 2005). There are two main approaches used in factor analysis: (i) exploratory factor analysis (EFA) and (ii) confirmatory factor analysis (CFA). Although some arguments have arisen concerning whether EFA and CFA are essential or to be taken one after another, Hair et al. (2010) state that it all depends on the objective of the factor analysis.

According to Nunnally & Bernstein (1994), in EFA, the objective of performing it is to identify the underlying structure of the factor and reduce the data into a smaller number of factors that will help to explain most of the variance observed in manifest variables, while CFA seeks to validate the hypothesized structure among the items or variables. For this research, EFA is used to reduce and purify the dimensions, as suggested by Hair et al. (2010), so that the validity and reliability can be met before the analysis embarks on the measurement of model assessment, as employed by Barroso, Carrión & Roldán (2010), and Wilson (2010). Besides data reduction, EFA can also be used for other reasons, as outlined below (Gorsuch, 1983; Hair et al., 2010):

i. To decrease a large number of items to a smaller number of factors for modelling purposes, where the large number of items prevents modelling all the measures individually.
ii. To choose a subset of variables from a larger set according to which original variables have the highest correlations with the principal component factors

iii. To generate a set of factors to be treated as uncorrelated items as one approach to handling multicollinearity in such procedures as multiple regression

iv. To validate a scale or index by representing that its constituent items load on the same factor, and to remove proposed scale items that cross-load on more than one factor

When undertaking factor analysis, Pallant (2005) explains that there are three major stages that need to be performed: (i) assessment of suitability of data for factor analysis, (ii) factor extraction, and (iii) factor rotation. Therefore, prior to performing the factor analysis, some assumptions should be included in the preliminary analysis performed to check for suitability of the data set.

The preliminary analysis of factor analysis leads to factor extraction. The main goal of factor extraction is to determine the factors that summarise the interrelationships between the variables. Seven methods of factor extraction are available: (i) principal components analysis (PCA), (ii) unweighted least squares, (iii) generalised least squares, (iv) maximum likelihood, (v) principal axis factoring, (vi) alpha factoring, and (vii) image factoring (Malhotra, 2007; Tabachnick & Fidell, 2007; Hair et al., 2010).

Although there are many types of extraction technique, the most frequently used for marketing and consumer behaviour is PCA. Tabachnick and Fidell (2007) suggest that if the objective of the research is to acquire an empirical summary rather than a theoretical solution, PCA is a better choice. The PCA method was preferred for this study than the other methods as this study is interested in an empirical summary rather than a theoretical solution. The items with a factor loading above the cut-off point 0.50 were retained for further analysis (Hair et al., 2010).

For determining the number of factors to be retained in a scale, the item needs to have an eigenvalue of one or retain a certain number of factors, whichever meets the analysis objective. This research uses Kaiser-Myer-Olkin's (KMO) criterion where only components with an eigenvalue of more than 1.0 are selected for further investigation (Hair et al., 2010).

Once the number of respondents is identified, the next step is to determine the patterns of loadings for interpretation. Rotation is used in factor analysis to achieve a simple factor structure. There are two main approaches for rotation: (i) orthogonal and (ii) oblique. The varimax rotation (orthogonal) was used in this study because the main aim of varimax rotation is to have a factor structure in which each variable loads highly on one and only one factor. In other words, the goal of this technique is to simplify factors by maximising the variance of the loadings within factors, across variables (Tabachnick & Fidell, 2007).

Also, the KMO, which is recognised as one of the best measures of determining the suitability of a set of data for subsequent factor analysis, was used to investigate the data in order to decide whether or not factor analysis should proceed. The KMO varies from 0 to 1.0, where small values of KMO suggest that a factor analysis should not be undertaken. The KMO should be ≥ 0.60 to proceed with factor analysis (Tabachnick & Fidell, 2007).

Another important statistical technique for factor analysis is Bartlett's test of sphericity (BTS). BTS assesses the overall significance of the correlation matrix. The best result in this test is when the value of the test statistics for sphericity is large and the significance level is small. Nunnally & Bernstein (1994), and Nunnally (1978) point out that data are

factorable when the BTS is significant at *p* value <0.05. Table 5.12 outlines the requirements for assessing the suitability for factor analysis before embarking on the measurement model assessment.

Table 5.12: Requirement for Assessing Factor Analysis Suitability

Condition	Requirement	Reference
Sample Size	Minimum: 5 cases to each item	Pallant (2005), Tabachnick & Fidell (2007)
Bartlett's Test of Sphericity (BTS)	Must be significant (p<.05)	Tabachnick & Fidell (2007)
Kaiser-Meyer-Olkin (KMO) Index	Must be at ≥0.5	Malhotra (2007), Hair et al. (2010)
Eigenvalue Rule	Eigenvalue ≥ 1	(Hair et al., 2010; Malhotra, 2007)
Scree Test	Above Elbow Point on the Eigenvalue Curve Plot	(Pallant, 2005)
Variance Extracted	≥ 50%	(Hair et al., 2010)

5.5 Partial Least Squares (PLS) – Structural Equation Modelling (SEM)

According to Hair et al. (2010), structural equation modelling (SEM) is a technique that seeks to explain the relationships among multiple variables. It is characterised by two components: measurement model and structural model. The measurement model enables the researcher to use several variables for a single independent or dependent variable whereby the structural model is the path model that relates independent to dependent variables.

Structural equation modelling includes a number of statistical methodologies allowing the estimation of a causal theoretical network of relationships linking latent complex

concepts, each measured by means of a number of observable indicators (Esposito Vinzi, Chin, Henseler & Wang, 2010). SEM specifies which variables are associated with each construct, and then loadings are only estimated where variables are associated with a construct; in which case cross loading should be avoided (Hair et al., 2010).

In SEM, there are two widely useable approaches in marketing and consumer behaviour research: (i) covariance-based (CB)-SEM and (ii) partial least squares (PLS)-SEM. Both of these approaches are known as second generation data analysis techniques (Gefen et al., 2000).

CB-SEM is a covariance-based approach that uses model fit to compare between models and is used to strengthen theory support that proposes the best possible model fit. In other words, the indices and residuals provided from the result indicate how closely the proposed model fits the data as opposed to a best fitting covariance structure (Gefen et al., 2000). CB-SEM reduces the difference between the covariance and those predicated by the theoretical model (Chin, 1998; Chin & Newsted, 1999). Thus, CB-SEM focuses more on explanation and is an appropriate tool for theory testing (Hair et al., 2010).

Whereas *PLS-SEM* is a path modelling statistical approach that models complex multivariate relationships among the observed and latent variables (Esposito Vinzi et al., 2010). PLS-SEM is designed to explain variance and variance-based, similar to ordinary least squares (OLS) multiple regression (Gefen et al., 2000). Therefore, the focus is much more on prediction (Chin & Newsted, 1999; Hair et al., 2010). PLS-SEM estimates the parameters, such that it minimises the residual variance of all the dependent variables in the model, rather than estimating the variance of all observed variables as in CB-SEM (Gefen et al., 2000). Although PLS can be used for confirming

the theory, it can also be used to suggest whether structural relationships exist or not and to propose suggestions for further testing (Chin, 1998). Table 5.13 shows the comparative analysis between PLS-SEM and CB-SEM conducted by Gefen et al. (2000).

Table 5.13: Comparative Analysis Between PLS-SEM and CB-SEM

Issue	*PLS-SEM*	*CB-SEM*
Objective of Overall Analysis	▪ Reject a set of path-specific null hypotheses of no effect	▪ Shows that the null hypothesis of the entire proposed model is plausible, while rejecting path specific null hypotheses of no effect
Objective of Variance Analysis	▪ Variance explanation (high R^2)	▪ Overall model fit
Theory Base	▪ Does not necessarily require a sound theory base. Supports both exploratory and confirmatory research	▪ Requires a sound theory base. Support confirmatory research
Assumed Distribution	▪ Relatively robust to deviations from multivariate distribution	▪ Multivariate normal, if estimation is through Maximum Likelihood (ML). Deviations from multivariate normal are supported with other estimation techniques
Sample Size	▪ At least 10 items the number of items in the most complex constructs	▪ At least 100 to 150 cases

In terms of application and statistical test, PLS-SEM uses SmartPLS software, while CB-SEM uses AMOS software. Although there are some diversities between PLS-SEM and CB-SEM programs, the basic specification of the structural model is similar (Hair et al., 2010).

This research adopts PLS-SEM for investigating the measurement model and structural modelling. Specifically, the reasons for using PLS-SEM in this research compared with CB-SEM are as follows:

(i) PLS-SEM is suitable for this research because of its exploratory nature in which some measures are new and the relationships have not been previously tested enough (Ainuddin et al., 2007; Hair et al., 2010; Holzmüller & Kasper, 1991).

(ii) PLS-SEM is suitable for complex models focusing on prediction and latent variable modelling of interaction effects. It is better to use PLS-SEM for this research because of its simplicity and uncomplicated testing of a mediation (Chin et al., 2003).

(iii) PLS-SEM is suggested for use when the relationship is assumed to not exist based on the literature and when theory is insufficiently grounded. Since this research compiles consumer needs to use media from various literature and adopting it in the new social media context, the existence of a relationship is not expected (Chin, 1998).

(iv) Similar to (iii) it is suggested by Falk & Miller (1992) that if a model has no strong relationships between variables, which is similar to this research, it is suggested that PLS-SEM be used as a method of structural analysis.

(v) PLS-SEM determines the relationships between established indicators to its respective latent variables, which is critical for validating exploratory models (Mahmood, Bagchi & Ford, 2004), thus it justifies why PLS-SEM is better for this research than CB-SEM.

Another intriguing aspect as to why PLS-SEM should be used for structural analysis is that its method of analysis is increasing in marketing and consumer behaviour research. The use of PLS-SEM methodology has become an increasingly applicable technique in

empirical research, which signifies an appreciation of the unique methodological features of PLS-SEM (Henseler, Ringle & Sinkovics, 2009). Henseler et al. (2009) reported that:

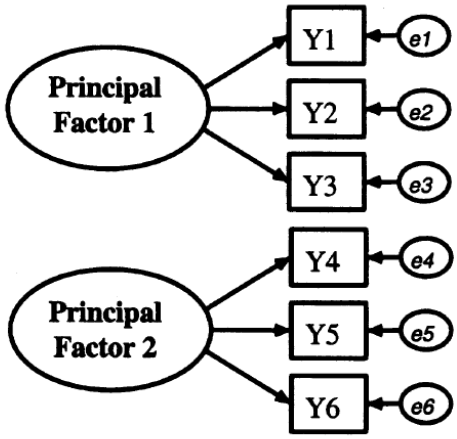
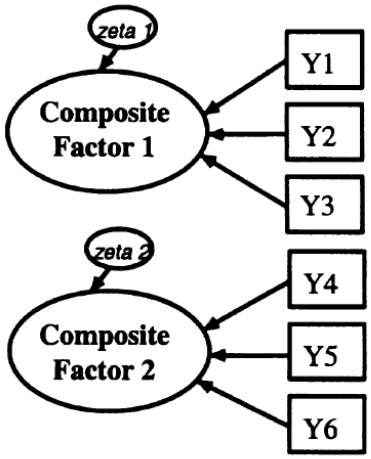
> *"As of March 2008, more than 30 articles on international marketing using PLS were published in double-blind reviewed journals".*

Hence, it is noted that PLS-SEM has been increasingly used as an alternative to structural analysis to CB-SEM (Hair et al., 2013). PLS-SEM can be considered as the method of choice for successful studies in marketing (Albers, 2009) and for estimating various consumer motivations (Fornell & Larcker, 1981).

5.5.1 Measurement Model Specification – Reflective Model

The measurement model is the component of the whole model in which latent constructs are prescribed. The latent constructs are unobserved variables implied by the covariance among two or more observed indicators. According to Jarvis, Mackenzie, and Podsakoff (2003) there are two different measurement models that use multiple indicators of latent constructs: (i) principal factor model and (ii) composite latent variable model. These two types of model are illustrated in Figure 5.13.

It is noted that in marketing and consumer research the most commonly used latent variable measurement model is the principal factor model or reflective where covariation among the measures is causal and therefore reflects the variation in the underlying latent factor (Jarvis et al., 2003). Accordingly, this research uses the principal factor model, also termed as reflective variables, in which the latent variable is assumed to influence the indicators that account for the correlations between constructs.

Principal Factor Model (Reflective)	*Composite Latent Variable Model (Formative)*
	
Direction of causality is from construct to measure	Direction of causality is from measure to construct
Measures expected to be correlated (measures should possess internal consistency reliability)	No reason to expect the measures are correlated (internal consistency is not implied)
Dropping an indicator from the measurement model does not alter the meaning of the construct	Dropping an indicator from the measurement model may alter the meaning of the construct
Takes measurement error into account at the item level	Takes measurement error into account at the construct level
Construct possesses "surplus" meaning	Construct possesses "surplus" meaning
Scale scores does not adequately represent the construct	Scale score does not adequately represent the construct

(Source: Jarvis et al., 2003)

Figure 5.13: Summary of Differences Between Types of Measurement Model

In the reflective measurement model of this research, the block of manifest variables related to a latent variable is assumed to measure a unique underlying concept of social media adoption. According to Esposito Vinzi et al. (2010), manifest variables reflect the corresponding latent variable, which plays the role of an endogenous variable in a specific measurement model. Indicators that are linked to the same latent variable should covary, which means that changes in one indicator imply changes in the others, which will affect the entire social media adoption model. In doing so, internal consistency in each block needs to be homogeneous. It is important to note that for the

reflective variables, the measurement model reproduces the factor analysis model, in which each variable is a function of the underlying factor. Hence, the manifest variables in a block are assumed to measure the same unique underlying concept.

It is important to ensure the type of measurement model specification because each specification, for a reflective or formative model, runs a different type of statistical procedure. For the reflective model, which this research uses, the following section will explain the statistical analyses that are required for this specification.

5.5.2 Procedures for Reflective Measurement Model

The measurement model is used to assess construct validity (Churchill, 1979). Construct validity involves the evaluation of the degree to which a measure correctly measures what it is supposed to measure (Cavana et al., 2001; Chen & Paulraj, 2004; Malhotra, 2007; Hair et al., 2010). ***To achieve construct validity, some conditions must be met including content and face validity, which was done during the development of the instrumentation and scale, thus, reliability, convergent validity and discriminant validity is herein undertaken in the measurement model (O'Leary-Kelly & Robert, 1998).*** As explained in section 5.3.2.6, content or face validity does not require statistical tests, hence it will not be discussed in this section. The following section will explain the procedures applied when testing the reliability and unidimensionality followed by the convergent validity and discriminant validity tests.

5.5.2.1 Reliability

Reliability refers to the extent to which measures are free from error, which will create consistency between the measurements of a variable (O'Leary-Kelly & Robert, 1998; Pallant, 2005; Hair et al., 2010). To achieve good reliability, the reliability coefficient or Cronbach's Alpha should be ≥ 0.70 (Hair et al., 2010). There is no standard cut-off point for the alpha coefficient, but the generally agreed upon lower limit for Cronbach's alpha is ≥ 0.70 (Malhotra, 2007), although it may decrease to even ≥ 0.50 (Nunnally, 1978) in exploratory research. The results of the reliability test of measurement constructs are discussed in Chapter Six, together with the results of the validity test.

It is noted that in section 5.3.2.7, Cronbach's alpha was used as a means to check for homogeneity among items, whereby in the reliability test in the measurement model assessment, despite having checked for internal consistency in the measurement set, it is also checked for composite reliability. ***Composite reliability (CR) refers to the internal consistency of indicators measuring the underlying factors (Fornell & Larcker, 1981). The rule of thumb of CR is that ≥ 0.70 implies good reliability (Hair et al., 2010).*** The composite reliability is given in SmartPLS software output and can be calculated using the following equation:

$$CR = \frac{(\sum_{i=1}^{n} Ei)2}{(\sum_{i=1}^{n} Li)2 + (\sum_{i=1}^{n} Li)}$$

Where:
L = Standardised factor loading
i = Number of the corresponding item
E = Error variance term for an item

5.5.2.2 Unidimensionality

Unidimensionality means that a set of items can be explained by a single underlying construct (Hair et al., 2010). The procedure for assessing unidimensionality requires that the items are significantly associated with an underlying construct, plus each item being associated with one and only one, latent variable (O'Leary-Kelly & Robert, 1998). ***By using the result of factor analysis, the indicator variables should load on only one construct with a factor loading of ±0.50. By using regression weights, it should be ≥0.50 or higher with significant t-values (≥1.96 = 0.05), as recommended by Hair et al. (2010).***

5.5.2.3 Convergent Validity

Convergent validity refers to the extent that the instrument designed measures the same construct and is related to each other (Malhotra, 2007). To examine the convergent validity, the average variance extracted (AVE) is computed by the indicators corresponding to each of the study constructs. The average variance extracted is also given in SmartPLS software output and can be calculated using the following equation:

$$AVE = \frac{\sum_{i=1}^{n} Li\ 2}{n}$$

Where:
L = Standardised factor loading
i = Number of the corresponding item

AVE is the amount of variance that is captured by the construct in relation to the amount of variance due to measurement error. If AVE is <0.50, the variance due to measurement error is larger than the variance captured by the construct, and the validity of the individual indicators, as well as the construct, is questionable (Fornell & Larcker, 1981).

Thus, convergent validity is established if the AVE for each construct accounts for ≥0.50 of the total variance. Also, this study examined convergent validity by examining the loading paths of all items, which should be statistically significant and >0.50 (Hair et al., 2010). It should be noted that reliability is also considered to be an indicator of good convergent validity if CR is ≥0.70.

5.5.2.4 Discriminant Validity

Discriminant validity is the extent to which the measure is indeed novel and not simply a reflection of other variables (Churchill, 1979). It is the extent to which it measures the constructs and is distinctly different from one another. ***Discriminant validity is examined using the procedure recommended by Fornell and Larcker (1981), in which discriminant validity is established for a construct if its AVE is larger than its shared variance with any other construct. The AVE was compared with the highest variance that each construct shares with the other constructs in the model.***

5.5.3 Procedure for Structural Model

The structural model is the hypothetical model that prescribes the relationships among the latent constructs and observed variables that are not indicators of latent constructs.

Normally, it is known as the component of an overall model that relates the constructs to other constructs by providing path coefficients (parameter values) for each of the research hypotheses. Specifically, each estimated path coefficient is tested for its respective statistical significance for the hypothesized relationships, which, at the same time, include standard errors and calculated t-values (Bryne, 2010; Hair et al., 2010).

Moreover, Hair et al. (2010) add that among the primary evaluation criteria for the structural model are the R^2 measures and the level of significance of the path coefficients. This is because the goal of the prediction-oriented PLS-SEM approach is to explain the endogenous latent variables' variance where the key target constructs level should be highly dependent.

Despite R^2, path coefficients of the PLS structural model are also interpreted as standardised beta coefficients of ordinary least squares regression. Paths that are not significant cannot support a prior hypothesis. The section below explains this technique in detail including bootstrapping and PLS algorithms, and how this relates to hypothesis testing (Hair et al., 2011). ***As a result, the structural model provides a meaningful and parsimonious explanation for observed relationships within a set of measured variables. The model also enables explanations of direct, indirect and total structural effects of the exogenous latent constructs on the endogenous constructs.***

5.5.3.1 Bootstrapping

According to Bryne (2010), the key idea underlying the bootstrap technique is that multiple subsamples from the original database can be created. The importance of this action is that it examines parameter distributions relative to each of these generated

samples. Therefore, these distributions serve as a bootstrap sampling distribution, which, technically, operates in the same way as does the general sampling distribution associated with parametric inferential statistics.

Bryne (2010) adds that in contrast to traditional statistical methods, the bootstrapping sampling distribution is concrete and allows for a comparison of the parametric values over repeated samples that have been drawn with a replacement from the original sample. With traditional inferential procedures, comparison is based on an infinite number of samples drawn hypothetically from the population of interest. Importantly, the sampling distribution of the inferential approach is based on available analytic formulas, which are linked to assumptions of normality, whereas the bootstrap sampling distribution is rendered free of such restrictions.

PLS-SEM applies non-parametric bootstrapping that involves repeated random sampling with a replacement from the original sample to create a bootstrap sample and to obtain standard errors for hypothesis testing (Davison & Hinkley, 1997; Hair et al., 2011). According to Hair et al. (2011), the bootstrapping procedure creates a large, pre-specified number of bootstrap samples, for instance, 5,000, by randomly drawing cases with replacements from the original sample. Each bootstrap sample should have the same number of cases as the original sample.

5.5.3.2 PLS Path Modelling Algorithms

Hair et al. (2011) explain that the PLS algorithm estimates the SEM results from each bootstrap sample, for instance, 5,000 PLS-SEM estimations. The repeated bootstrap parameter estimates are then used to create an empirical sampling distribution for each

model parameter, and the empirical sampling distribution's standard deviation is used as a proxy for the empirical standard error for the parameter. The obtained path model coefficients form a bootstrap distribution, which is viewed as an approximation of the sampling distribution.

According to Vinzi et al. (2010), the PLS path modelling algorithm alternates the outer and inner estimation stages by iterating until convergence. Upon convergence, the estimates of the latent variable scores are obtained. ***Thus, the PLS path modelling algorithm provides a direct estimate of the latent variable individual scores as aggregates of manifest variables that naturally involve measurement error. Finally, path coefficients are estimated through PLS regression.***

5.5.3.3 Quality Indexes

PLS path modelling is a variance-based model that is strongly oriented to prediction. Therefore, for model validation, PLS focuses on the model predictive capability. Each part of the model needs to be validated including the measurement model and structural model. It should be noted that model validation is not the same as construct validation.

To validate a model PLS path modelling provides three different fit indexes – communality index, redundancy index and goodness-of-fit (GoF) index. For communality and the redundancy index, SmartPLS runs the calculation, whereas for GoF, it needs to be calculated manually.

In evaluating goodness-of-fit (GoF), it can be achieved by calculating the geometric mean of the average communality and the average R^2 using the following equation:

$$GoF = \sqrt{\left[(\text{average communality}) \times (\text{average } R^2)\right]}$$

Where:
Average communality is a weighted average of the different communalities with the weights being the number of indicators per latent variable.

5.5.3.4 Hypotheses Testing

The path coefficients and the R^2 values derived from the competing models provide the statistical basis for hypotheses testing to determine whether the hypothesised relationships are statistically significant. Path coefficients reflect the strength of the relationships between the exogenous and endogenous variables. The R^2 value indicates the predictive power of a model for endogenous variables.

The significance of the path is determined by calculating the *t*-value using a bootstrap resampling method (500 samples). The bootstrap is a general statistical technique for assessing uncertainty through re-sampling data with data replacement (Chin, 1998). Communality and redundancy coefficients can also be used in essentially the same way as the R^2, since they reflect the relative amount of the explained variance for latent and manifest variables.

Therefore, in order to ensure that the proposed hypotheses are supported the R^2 value needs to be high to ensure the predictive power of the relationship, together with a significant t-value at >1.96 or greater.

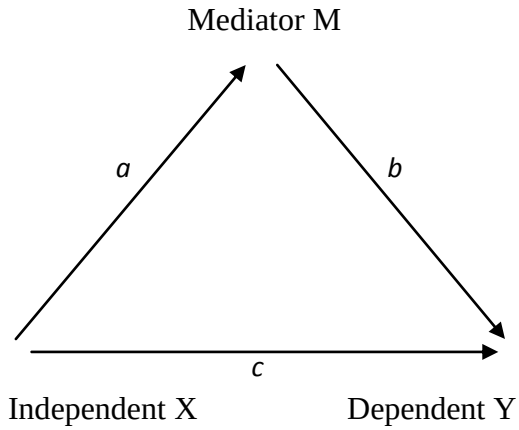
5.5.4 Procedure for Testing Mediation Effect

In testing the mediation effect, Baron & Kenny's (1986) criteria for establishing mediation is taken into consideration. These criteria are influential in that they were cited by almost 12,688 journal articles since they were proposed up until 2009, and the citations per year are assumed to grow stronger (Zhao et al., 2010).

According to Baron & Kenny (1986), in order to establish an independent variable X that has an affect on the dependent variable Y through a mediating variable M, there are three tests that need to be undertaken, as explained in Figure 5.14.

From Figure 5.14, it is important to understand that in order to test mediation the conditions that must be met are that the independent variable must affect the mediator in the first equation. The independent variable must be shown to affect the dependent in the second equation and the mediator must affect the dependent variable in the third equation. Sequentially, to interpret the mediation affect, the following is suggested by Baron & Kenny (Zhao et al., 2010):

i. Mediation is assumed to be strongest when there is an indirect effect but no direct effect in equation 3; however the strength of mediation should be measured by the size of the indirect effect, not by the lack of the direct effect
ii. There need not be a significant effect to be mediated in equation 2, there should only be one requirement to establish mediation – that the indirect effect *a* x *b* be significant
iii. The Sobel test is low in power compared to the bootstrap test, which was made popular by Preacher & Hayes (2004).



A variable functions as a mediator when it meets the following conditions:

i. Variations in the level of the independent variable significantly account for variations in the presumed mediator (Path *a*)
ii. Variations in the mediator significantly account for variations in the dependent variable (Path *b*)
iii. Path a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when Path *c* is zero

(Source: Baron & Kenny, 1986)

Figure 5.14: Condition for Testing Mediation Effect

From this interpretation, it has been noted in Baron and Kenny (1986), and Zhao et al. (2010) that in trying to obtain the strongest mediation, the indirect effect is needed, which is called "full mediation", whereas when there are both an indirect and direct effect, it is called "partial mediation". However, from the literature, it is observed that although many researchers aimed for full mediation, much of the literature settled for partial mediation due to the fact that the results are accompanied by an indirect effect (Zhao et al., 2010).

The PLS-SEM testing for mediation effect is done using the bootstrap test, which was explained earlier and the blindfolding test that is explained in the next section. The method of examining competing models by Henseler and Chin (2010) is also applied.

5.5.4.1 Blindfolding

The blindfolding approach proposed by Wold (1982) is applied to calculate the CV-communality and CV-redundancy indexes. CV refers to construct cross-validated. The CV-communality index (H^2) measures the quality of the measurement model, whereas the CV-redundancy index (F^2) measures the quality of the structural model (Tenenhaus, Vinzi, Chatelin & Lauro, 2005). According to Tenenhaus et al. (2005), the CV-communality index (H^2) is used as a cross-validated R^2 between the block manifest variables and their own latent variable, while, CV-communality measures the capability of the path model to predict the manifest variables directly from their own latent variable by cross-validation. By using the mean of the CV-communality indexes, the measurement model quality can be established if it is positive for all blocks of variables.

The quality of each structural equation is given by the CV-redundancy index defined as a kind of cross-validated R^2 between the manifest variables of an endogenous latent variable and all the manifest variables associated with the latent variables explaining the endogenous latent variable, using estimated structural model. In other words, it measures the capability of the path model to predict the endogenous manifest variables indirectly from a prediction of their own latent variable using the related structural relation by cross-validation. ***By using the mean of the various CV-redundancy indexes (F^2), the structural model quality can be established if it is positive for all endogenous blocks.***

5.6 Chapter Summary

This chapter presents a detailed discussion of the chosen research design, methodology and the data collection and analysis methods used to conduct the research. These issues are addressed in light of the research identified in Chapter One, as well as the literature review in Chapters Two and Three.

This research uses the two-phase sequential method to achieve the study objectives. Phase one uses a qualitative approach, that is FGD, while the second phase uses a quantitative approach, namely, the web-based survey. As noted, this research studies the behaviour of social media users, which is aimed to examine the needs and motivations that drive the dramatic increase in social media adoption.

The process of developing the construct for four exogenous constructs – PERSONAL, SOCIAL, TENSION and INNO – and one endogenous construct, that is, ADOPT, and the main statistical analysis techniques are also discussed. Multivariate assumption, factor analysis, measurement model assessment and structural model assessment have been used to test the research framework and the proposed relationship, as discussed in Chapter Four. The mediation effect is also tested in order to see the strength of mediation proposed in the research framework, as suggested by some studies. The following chapters provide the results of the analysis, discuss implications of the findings and suggest directions for further research.

Chapter Six
DATA ANALYSIS

6.1 Introduction

In the preceding chapter, the methodology adopted in this research was extensively elaborated upon. This chapter discusses the results of the data collection and findings from the statistical tests applied using Nvivo software, SPSS and Smart PLS software. For analysing the qualitative data, Nvivo software was used and for analysing the quantitative data, SPSS and SmartPLS software were used.

In the data analysis step, the data gathered were analysed appropriately to see if the research question and hypotheses were supported. Analyses of both qualitative and quantitative data were carried out to determine whether the research objectives are substantiated. Therefore, appropriate statistical techniques were employed in order to ensure that the hypotheses made are all well supported and have a significant relationship with each other.

This chapter is an important stage of the data analysis, not only in terms of scrutinising and summarising data, but also for model formulation using more advanced statistical techniques at the later stage of the analysis process.

This chapter starts with an analysis of the results from the focus group discussion followed by the survey research that presents the results of developing measures, reliability and validity. Next, it elaborates on the results of the multivariate test of assumption, factor analysis, measurement model assessment and structural model

analysis using the PLS technique. The results on hypotheses testing and mediation effect are also presented at the end of this chapter.

6.2 Focus Group Analysis

This section presents data analysis for the focus group discussion (FGD) in accordance with the methodology discussed in Chapter Four. This research employs sequential triangulation strategy, in which the mixed method is designed in such a way that qualitative research is done first to explore the proposed constructs and to confirm the flow of relationship between the constructs proposed in the theoretical framework. Therefore, the qualitative data collection is undertaken to understand the construct categories and properties, as conceptualised by the research framework in Figure 6.1.

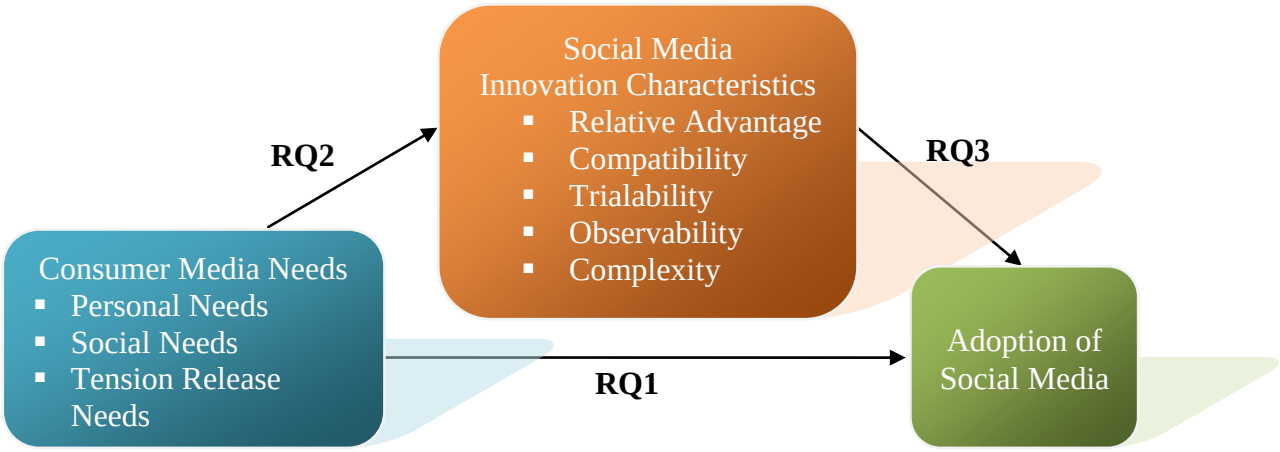


Figure 6.1: Research Framework Categories and Properties

Compared to quantitative data analysis where numbers and unit of analysis play an important role to justify a good data collection, qualitative data analysis uses words as a unit of analysis to justify the quality of data collection (Malhotra, 2007). The goal of qualitative data analysis is to decipher, examine and interpret meaningful patterns or

themes that emerge out of the data. The following sub-section explains how the data were decoded and examined.

6.2.1 Fieldwork – Discussion and Sessions

The FGDs were conducted at the Graduate School of Business, University of Malaya (for pre-testing and pilot testing) and some were held in hotel meeting rooms around Kuala Lumpur (for actual FGD). As participants arrived, they were greeted and offered refreshments. Sessions began with a welcome and a brief overview of the topic and ground rules. Following this introduction, participants signed the consent forms. During the FGD, which was conducted in an informal style to encourage open participation, all participants were free to speak at any time. At the start, two voice recorders were turned on and the focus group participants were asked to introduce themselves and state what social media accounts they own, how many social connections they have and how they came across the registration page. Voice recorder devices were checked again to be certain that participants' responses were captured, after which, the FGD started and lasted for approximately one and half hours.

The discussions were structured into nine topics relating to their feelings, needs and motivation to use social media. Questions were mostly open-ended which were designed to address affective and cognitive responses towards adopting social media. Possible probes were developed to accompany each question. Initial impressions, overall themes, non-verbal behaviour and suggestions for improvements were addressed, and notes were made. Levels of familiarity and other group dynamics were also noted. After the FGD were completed, participants were asked to fill out the payment form. Participants were given RM50 as a token of appreciation. All

participants were thanked for their participation at the time of the focus group. It took three months from January until March 2011 to organise and complete the FGD from pre-testing until the actual FGD session. The details on the FGD session are illustrated in Table 6.1.

Table 6.1: Details of Focus Group Discussions and Sessions

Qualitative Stage	*Participants*	*Session*
Pre-Testing	6	▪ 1 session of 3 male participants ▪ 1 session of 3 female participants
Pilot Testing	10	▪ 1 session of 5 male participants ▪ 1 session of 5 female participants
Actual FGD	48	▪ 3 sessions of 8 male participants ▪ 3 sessions of 8 female participants

6.2.2 Coding of Theme

From the actual fieldwork for the FGD, six transcripts from 48 participants were gathered. These raw data were then transcribed in order to allow for content analysis to take place using Nvivo 9. Given the volume of qualitative data and time limitation that this research had, Nvivo 9 software was used because it allows systematic content analysis to be done, and, hence, the emerging trend towards social media adoption was identified.

Thereafter, the coding of themes was done. In this qualitative research, coding of the theme was done merely to define the eligibility of the latent variable before it was statistically tested later in the quantitative stage. Determining a set of themes permits examination of the text and content to be carried out, and, at the same time, allows new concepts to be incorporated into the coding process, if necessary.

6.2.3 Content Analysis Verification

Since the same moderator was present in all discussions and had intensive exposure to the data, it was ideal for the same person to conduct the transcription of the script. Prior to the start of the transcription, the moderator listened to each recording to become familiar with the flow of the dialogue. Recording scripts were directly transcribed using Word 2007. A word processing program was chosen because it allowed the moderator to sort, categorise and easily rearrange statements later on. The moderator listened to and rewound each recording multiple times to accurately capture the quotations.

Transcripts were imported into Nvivo 9 for further review, coding and identification of themes. ***Focus group themes and results were reported using a descriptive summary method described by Krueger (1994) that includes a descriptive summary of each theme followed by illustrative quotations for emphasis and clarity. The results of the analysis were categorised into two, that is, affective responses of social media adoption and cognitive responses of social media adoption. The following section will discuss the identified theme in detail.***

6.2.3.1 Affective Responses Concerning Social Media Adoption

Affective responses concerning social media adoption refer to the *consumers' motivation to use social media*, which explores the consumer affective needs that induce them to use social media. These responses were derived from the FGD transcription through nine themes. These themes were categorised as: (i) Enjoyment, (ii) Entertainment, (iii) Interaction, (iv) Fashion/Trend, (v) Sociability/Social Concerns, (vi)

Friendship/Companionship, (vii) Sense of Belonging, (viii) Playfulness and (ix) Escapism. These themes were derived from the research framework proposed in Chapter Four. The verification of these affective themes is depicted in Table 6.2.

Table 6.2: Consumer Needs and Motivation to Use Social Media

Discussion Themes	*Responses/Findings*
1. Enjoyment	All participants agreed that they were motivated to use social media due to the enjoyment they have when using, participating and conversing in it. The feelings that they describe most include contentment, satisfaction, fun and happy.
2. Entertainment	All participants agreed that they were motivated to use social media due to the entertainment aspect that the medium gave. It keeps them entertained and excited.
3. Interaction	All participants agreed that they were motivated to use social media because of its interactivity. It gives them personal and group conversation, and instantaneous information.
4. Fashion/Trend	Most of the participants agreed that social media is fashionable and it has become the trend for everyone to have their own social media account. Thus, due to this pressure, many of them are motivated to be part of the social media culture. Since social media can be accessed through many devices and synchronization can be done for all devices, it enhances their usage and indirectly gives them the feeling of trendiness.
5. Sociability/ Social Concerns	Although not all are agreed on this element of trying to be social or being socially influenced, it turned out to be one of the finest motivations for most of the participants to embrace social media. They agreed that social influence somehow plays a role for them to adopt social media, basically because everyone they meet usually talks about (i) meeting old friends on social media, (ii) school/college/ university alumni in social media, (iii) latest issues or gossip among friends happening in social media, and (iv) sharing the same interest on pages like cooking, baking, fishing, football and fashion. Also, the feeling when people ask about their own social media address gives slight pressure for them to have at least own one social media account.
6. Friendship/ Companionship	Not all agreed with this. Basically, those that find these elements motivating argued that with social media, they connect, reconnect and keep their friendship alive because of the status update, picture sharing and instant messages that keep them in the know about a friend's recent condition.

Discussion Themes	*Responses/Findings*
7. Sense of Belongingness	Less than half of the participants agreed with this. However, those that agreed admit that after starting to use social media, they feel attached to their social media, in that they feel that the connections they make with friends makes them feel that they have a circle or online group with whom they can talk and share.
8. Playfulness	Those that agreed with this are those that use social media for games, music as well as some for finding partners or new relationships. Also apps (applications) that can be found in social media, such as love horoscope, feng shui and playing cards, amuse them.
9. Escapism	This is the least attractive element for them although some agreed that they use social media as a point of escapism from the real world just to socialise rather than having to go out from the house and meet up with friends in heavy traffic or hot sun.

In conclusion, no new elements were derived from the FGD results that suggest changes to the research framework. This categorisation confirms the latent variable proposed in the framework as having the correct structure.

6.2.3.2 Cognitive Responses Concerning Social Media Adoption

Cognitive responses of social media adoption refers to the *consumers' motivation that pushes them to use social media through the idea and experience that they perceive social media can give to them*. It alerts consumers to think, know and apprehend the usefulness of social media technology innovation, which helps to ease their usage. These responses consist of social media Relative Advantage, Compatibility, Trialability, Observability and Complexity. The verification of these cognitive themes is depicted in Table 6.3.

Table 6.3: Innovation Characteristics that Enhance Social Media Usage

Discussion Themes	*Responses/Findings*
Relative Advantage	Almost all participants agreed that social media has its own advantage if compared to other technology. Importantly, due to its relative advantage, social media is now available on most devices, such as iPhone, android phone, iPad/tablet and computers; and it permits synchronisation. Due to this advantage, it helps the participant to find friends online almost anywhere and everywhere in the world and have control over their network.
Compatibility	All agreed that social media is compatible with other devices. It fits in all technology, for instance, computer, android, Apple OS, and tablet. Also, due to the fibre optic cable, it enhances the speed of the Internet and Wi-Fi usage.
Trialability	All of the participants disagree with this element as they said that social media is free and a trial is not possible in this form. It belongs to the public and social users. It connects everyone, anytime and anywhere.
Observability	All of them agreed with this element. The social media usage can be observed physically as, in public, most people are very attached to their smart phone, tablet or iPad. Also, when everyone is connected and events, gathering or groups are organised via social media, those that do not have an account feel left out, which motivated them to sign up based on their observation and peer pressure.
Complexity	Most of the participants did not find social media complex. However, for a first time user, they need some time to understand the interface and its site navigation.

In conclusion, from Table 6.3, there were also no new elements derived from the FGD results that suggest changes in the research framework. ***This categorisation confirms the latent variable proposed in the framework. However, some of the respondents stress that these cognitive responses are not necessary for them to get motivated to use social media. Their own affective responses are strong enough to get them to adopt social media; this claim will be further tested in quantitative analysis later in this chapter.***

6.2.4 Qualitative Conclusion

From the content analysis presented, it is noted that some latent variables had a strong motivation effect on the consumer (i.e. enjoyment, entertainment, interactivity, fashion/ trend, sociability/social concerns, friendship/companionship, sense of belongingness, relative advantage, compatibility and observability) and there are some that have a fairly weak effect (i.e. escapism, trialability and complexity). However, as long as these elements play a significant role in the FGD, they are retained for further testing in the quantitative analysis. The elements, strong or weak, were kept for further refinement because of the literature support they have. Omitting them will affect the analysis at a later stage. The results from the FGD confirm that the latent variables proposed in the research framework are acceptable and satisfactory.

The most prominent themes and issues noted from Section 6.2.3.1 and 6.2.3.2 were then extracted from the FGD findings and incorporated into the questionnaire design. These qualitative findings were utilised to add insights and support for the conceptual framework development, which was elaborated upon in Chapter Four, as well as the theoretical background and literature review discussed in Chapters Two and Three. Given that the aims of the research questions and the research objectives were to discover relationships among variables and propose a new model of social media adoption, the quantitative technique is the next appropriate method to address.

6.3 Survey Analysis

This section presents the data analysis for the online survey in accordance with the analysis techniques presented in Chapter Five, Section 5.3.2. An online questionnaire

was used to measure the theoretical constructs. Pretesting and pilot testing took place before the actual online survey research was released to the target population. Twenty questionnaires were sent out for pretesting. After slight modification was done, 100 questionnaires were sent out online for pilot testing. Based on the feedback received from the pilot study, another round of purification and modification was undertaken, after which, the actual survey research was immediately released online; as summarised in Table 6.4.

Table 6.4: Data Collection for Survey Research

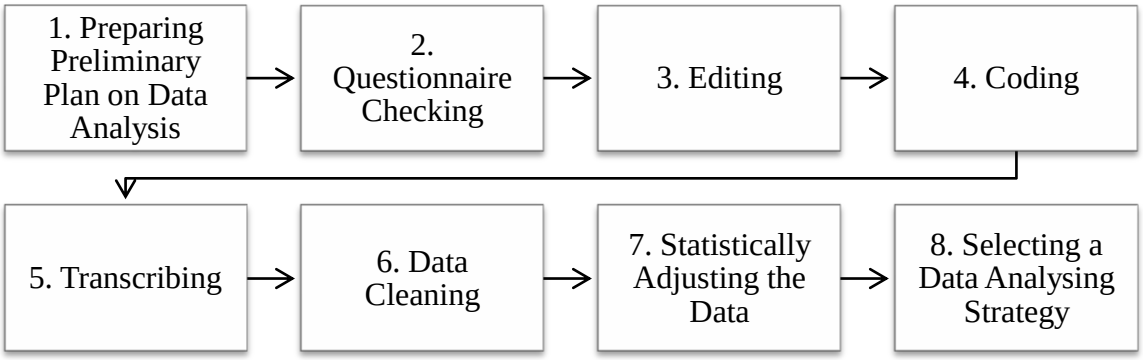
Quantitative Stage	*Respondents*	*Date*
Pre-Testing (Offline)	20	May 2011
Pilot Testing (Online)	100	June 2011
Actual FGD (Online)	428	August to September 2011

The purpose of the online survey was to gather data that examine the driver that causes consumers to adopt social media and to test the hypotheses. The mediation effects of the innovation characteristics that are assumed to impact on the entire behaviour were also investigated. The survey analysis provides further insights and valuable statistical findings apropos to the findings received from the qualitative research. The relationships between consumer drivers to use social media and innovation characteristics that lead to adoption were examined in a structural model form at the end of the analysis. In the following section, the data were prepared by coding, editing, cleaning and analysed.

6.3.1 Data Preparation

Data preparation is a process of converting information from the questionnaire so that a computer can read the data in its own language. The purpose of the data preparation process is to ensure that the raw data collected is complete, accurate and clean in order to proceed with statistical analysis so that coding can be done and outliers, missing values, non-normal distributions and errors impacting the data can be detected (Hair et al., 2010; Churchill, 1979). In Figure 6.2, Malhotra (2007) proposed that data preparation should have eight steps; however, some steps can be ignored depending on the nature of data collection.

Since this research used an online survey, and data were obtained in electronic form, the transcribing stage was averted because the editing and transcribing was done by the online software itself. ***The statistical analysis software was set to the programme for the standard process for questionnaires, which returned the statistical summaries and charts automatically.***



(Source: Malhotra, 2007)

Figure 6.2: Steps of Data Preparation

6.3.2 Data Editing

Data editing is the process in which the raw data are checked. The objective of data editing is to increase the accuracy and precision of the data by identifying illegible, incomplete, inconsistent or ambiguous responses (Zikmund, 2003; Babbie, 2007).

Using an online survey has helped considerably in this process, as the data collected from the online survey were automatically transferred onto a spreadsheet. Therefore, the data editing was less involved because when the data were transferred into SPSS, the editing could be done promptly.

6.3.3 Data Coding

Data coding involves assigning numerical values to the questions contained in the survey instrument. Coding the data was done by assigning a code to each individual response for each question within the survey (Malhotra, 2007; Hair et al., 2010). The scheme for categorising the questionnaires was used as the basis for coding in accordance with the theme set from the FGD.

In addition, in order to ensure that human error was avoided, an online survey was considered to be the best solution to this problem. ***For the online survey, the data were collected and entered in a spreadsheet by the system itself; therefore human error was not possible.*** All questions in the questionnaire were coded as presented in Table 6.5.

Table 6.5: Latent and Manifest Variable Coding

*Question Number**	*Latent Variables*	*Manifest Variables*	*Code*
10, 14	Personal Needs		PERSONAL
		Trendiness	TRN
		Enjoyment	ENJ
		Entertainment	ENT
		Interactivity	INT
11	Social Needs		SOCIAL
		Social Influence	SIF
		Social Interaction	SIN
12	Tension Release Needs		TENSION
		Belongingness	BLG
		Companionship	CSHIP
		Playfulness	PLY
		Escapism	ESC
13	Innovation Characteristics		INNO
		Relative Advantage	RA
		Compatibility	COM
		Trialability	TRL
		Observability	OBS
		Complexity	COX
15	Adoption		ADOPT

***** *These question numbers are based on the online survey set-up*

6.3.4 Data Cleaning

After the raw data were edited, coded and transferred into SPSS, errors were checked through data cleaning and screening. This process was to ensure that the raw data have been transcribed accurately by identifying inconsistent responses, missing data and outliers (Malhotra & Birks, 2007). Failure to do so creates potential problems that may affect the results of the statistical tests (Hair et al., 2010).

Due to the fact that this research uses an online survey, in which data entry was done by the system, missing values were not expected to exist. However, since checking for missing values using frequency distribution is possible, the analysis was done. The

results from the frequency distributions did not manage to find any missing values, as expected.

Having checked that, the next step was to examine outliers. An outlier is a score lying far outside the normal range of distribution of scores. In other words, outliers can be defined as individual responses that are probably valid responses, but quite different from the rest of the responses to a particular question (Hair et al., 2010). These unusual values that are quite different from the rest of the data can have potentially dramatic effects on distribution. ***In this research outliers were not noted.***

6.3.5 The Response Rates

The survey response rate is defined as the percentage of the total attempted questions completed. Online survey research is by far the fastest method to obtain data from a large number of respondents. The speed with which a questionnaire can be created, distributed to respondents and the data returned is very fast.

In order to ensure that the online survey taps the right sample, screening questions were asked prior to answering the full survey – doing this minimises the chance of biased responses. If the respondent answered 'Yes' they were considered for the study and were allowed to proceed to the next level, otherwise, they received a termination message and thank you note for their intention to participate. The snapshot of the screening question is presented in Figure 6.3.

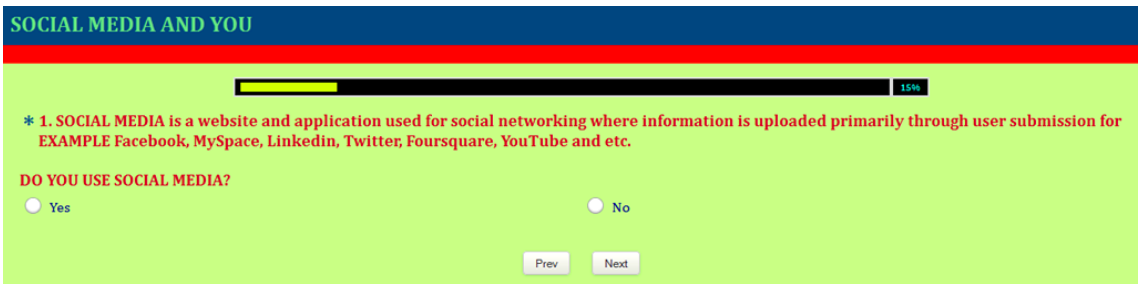


Figure 6.3: Snapshot of Screening Question from Online Survey

With regards to the response rate, there are some arguments on the online survey response rate, as highlighted by Van Gelder et al. (2010) in their study on web-based questionnaires. It is hard to calculate the percentage response rate for online surveys, especially when the survey uses survey software to get the response, because the link to the survey research is posted and linked at random. As was discussed in Chapter Five, section 5.3.2.4, the link to the survey website was closed right after it reached the intended number for the sample size. Thus, when the survey research response reached 428, the survey was closed. It took two months to acquire the 428 survey responses.

Despite having the advantage of being connected with the target population through social media, the online survey respondents were also offered a lucky draw in terms of a RM50 shopping voucher for the five lucky winners. ***With 428 completed questionnaires, the analyses were performed using SPSS version 18, while the PLS program was used for measurement model assessment and the structural model.***

6.3.6 Descriptive Statistics

The preliminary data analysis involved descriptive statistics analysis. This section focuses on providing general information about the respondents. The aim being to present a brief account of the sample profile for this research. Frequency analysis was

used to calculate the respondent's percentage, its measure of location and dispersion, that is, the mean, mode, median and standard deviation according to the demographic profile, geographical and ethnicity distribution and social media patterns and trends of the respondents that made up the sample of social media adopters/users. The findings are presented in tables, figures and graphs for simplicity and better visualization of the large datasets.

This type of data only used descriptive analysis due to the fact that it does not involve the construction of a theoretical framework and is collected using a nominal and interval scale. The purpose of this data is to look at the trend of consumer usage concerning social media.

6.3.6.1 Demographic Profiles

As mentioned in Chapter Five, Section 5.3.2.2, all respondents who participated in this research had already been selected for their experience of using social media and have an account with at least one social media. Thus, all the respondents involved in this research are actual social media users.

The demographic profile – gender, age, marital status, employment level, education level and income level – of the respondents in this research were asked to provide their background information by answering multiple choice questions that were designed in the form of nominal scales.

Table 6.6: Sample Characteristics by Demographic

	Frequency (N=428)	*Percentage*
By gender		
Male	174	40.7
Female	254	**59.3**
By Age		
Below 20 years old	13	3.0
20-24 years old	53	12.4
25-34 years old	236	**55.1**
35-44 years old	124	29.0
45-54 years old	2	0.5
By Marital Status		
Single	201	**47.0**
Married with children	169	39.5
Married without children	56	13.1
Divorced/Widow	2	0.5
By Employment Level		
Top Management/Professional	55	12.9
Manager	49	11.4
Executive/Administrator	108	**25.2**
Sales Personnel/Supervisor	34	7.9
Teacher/Trainer	33	7.7
Businessman	18	4.2
Clerical/Production	14	3.3
Technician	8	1.9
Housewife	5	1.2
Student	97	22.7
Others	7	1.6
By Education Level		
SPM/MCE	39	9.1
STPM/HSC	17	4.0
Certificate/Diploma	89	20.8
Bachelor Degree	157	**36.7**
Master Degree	104	24.3
PhD	22	5.1
By Income Level		
Less than RM2,000	105	24.5
RM2,001-RM4,000	194	**45.3**
RM4,001-RM6,000	87	20.3
RM6,001-RM8,000	25	5.8
RM8,001-RM10,000	12	2.8
More than RM10,000	5	1.2

Table 6.6 explains the sample characteristics in detail. It is noted that 40.7% of the respondents are male and 59.3% are female, out of these 47% are single. The highest respondent age was between 25-34 years old, which accounts for 55.1%. This shows that more than half of the social media users are among the younger cohort. Overall, the respondents' ages are fairly normally distributed.

Concerning education level, most of the respondents hold Bachelor Degree, which accounted for 36.7% and worked in administrative or executive job level, which accounted for 25.2%. Collectively, most of the respondents are working adults. The results imply that most of the social media users are quite highly educated. The respondents earned between RM2,001 – RM4,000 monthly, which accounts for 45.3%.

In summary, demographically, this research found that the social media users are mostly young single female, who are well educated with at least high school education.

6.3.6.2 Geographical and Ethnic Distribution

The respondents were also grouped based on ethnicity and location. As shown in Figure 6.4, the respondents come from all over Malaysia. Most of the respondents come from the central region, that is, Selangor, accounting for 23.4%. East Malaysia shows the lowest number of respondents, accounting for 0.9% each. This shows that most of the Malaysians that use social media are from West Malaysia and are highly concentrated in the area of West Coast Malaysia, or, specifically, Central.

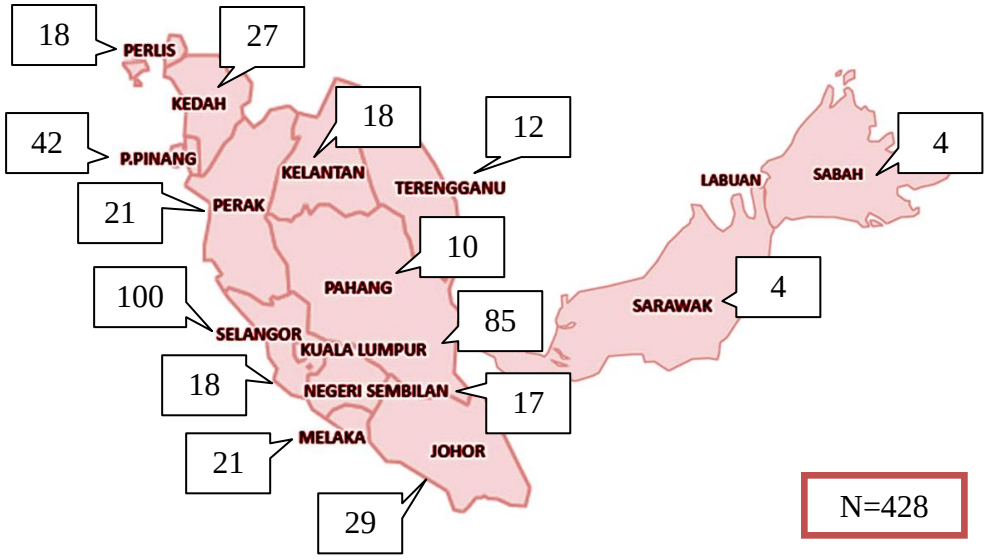


Figure 6.4: Geographical Distribution of Social Media Users

Apart from identifying the geographical distribution, ethnicity also contributes as an important descriptive data that portrays the multi-racial nature of Malaysia. Based on the ethnic distribution, it is noted that Malays are the highest social media users, accounting for 64.3%, followed by Chinese at 20.1% and Indian at 11.9%. This distribution showing Malays to be the highest ethnic group that adopt social media is expected due to the fact that Malays are the largest ethnic group in Malaysia. Table 6.7 shows the ethnic distribution in detail.

Table 6.7: Ethnic Distribution

	Frequency (N=428)	*Valid Per cent*
By Ethnicity		
Malay	275	64.3
Chinese	86	20.1
Indian	51	11.9
Others	16	3.7

The results imply that the online survey questionnaires were collected from a wide range of Malaysian states. This finding is of value to this research, as it confirms that the online survey has been dispersed across Malaysia. Therefore, generalization of the results of this research, as representing the opinions of the Malaysian population, is feasible.

6.3.6.3 Social Media Patterns and Trends

i. Social Media Adoption

In terms of social media usage, most of the respondents started using social media between 4 to 6 years ago accounting for 35.5%. The respondents that adopted social media since its inception, that is between 7 to 9 years ago, account for 22.4%. The recent adopters account for 3.5%, which is a very low rate compared to those that adopted social media at the early stage. A summary of this is depicted in Figure 6.5. These findings are in accordance with the previous research done by Socialbakers (2012). In addition, these findings explain Rogers (2003) Diffusion of Innovation Theory (DIT), which conjectures that adoption is a success when the acceptance is high.

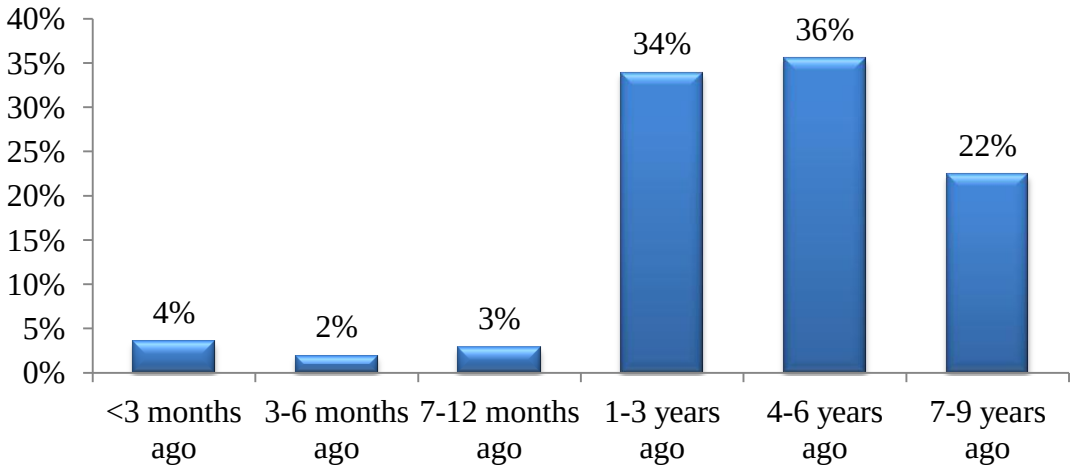
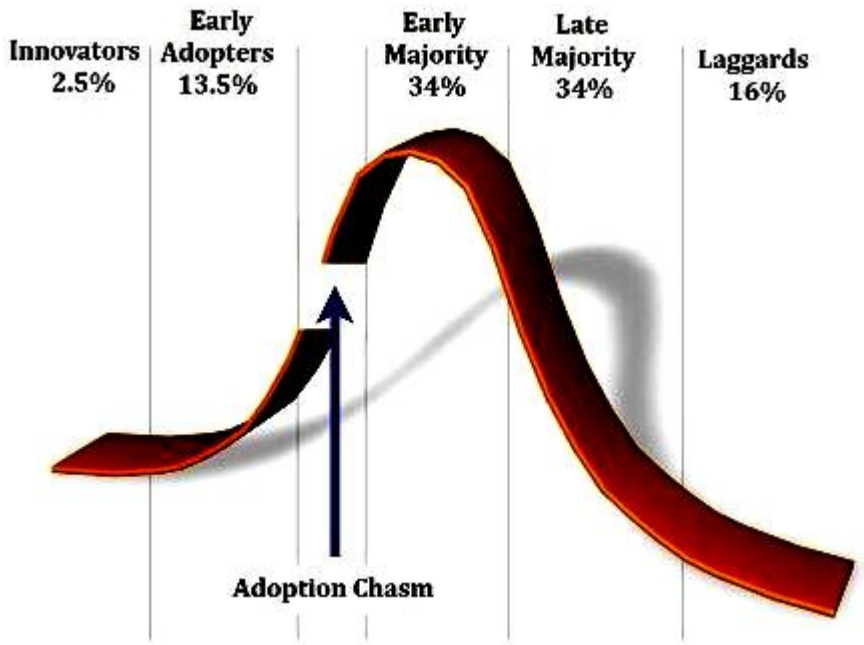


Figure 6.5: Social Media Adoption

In understanding the type of social media adopters, this study looks at Rogers adoption curve, which explains the basis for categorising the degree of innovativeness for adopters that comprised (i) innovators – 2.5%, (ii) early adopters – 13.5%, (iii) early majority – 34%, (iv) late majority – 34%, and (v) laggards – 16%. Rogers illustrated this in the shape of a bell-curve that indicates the typical adoption of an innovation over time when plotted on a frequency basis, as illustrated in Figure 6.6.



(Source: Rogers, 2003)

Figure 6.6: Technology Adoption Curve

Hence, the results signify that social media users are normally distributed, with the majority of the existing social media users falling into the category of early majority (33.9%) and late majority (35.5%). The findings indicate that, generally, social media users appear to be those that have been using social media since it was first introduced, as explained in Chapter Two.

ii. Frequency of Using Social Media

Figure 6.7 reports the frequency of social media usage. The results indicate, on average, that 57.5% of the respondents logged into their social media several times every day, counting the highest log on frequency. The remaining 17.5% logged on once a day, 3.7% once a week, 7.2% between two to three times a week and 3% logged on between two to three times a month. In addition, the findings also showed that about 11% did not log on at all; it is presumed that this group of respondents are passive social media users. They are the group of respondents that signed up for a social media account and have been passive after that. From the result, it is suspected that those who logged in to social media frequently contribute to the active social media activity.

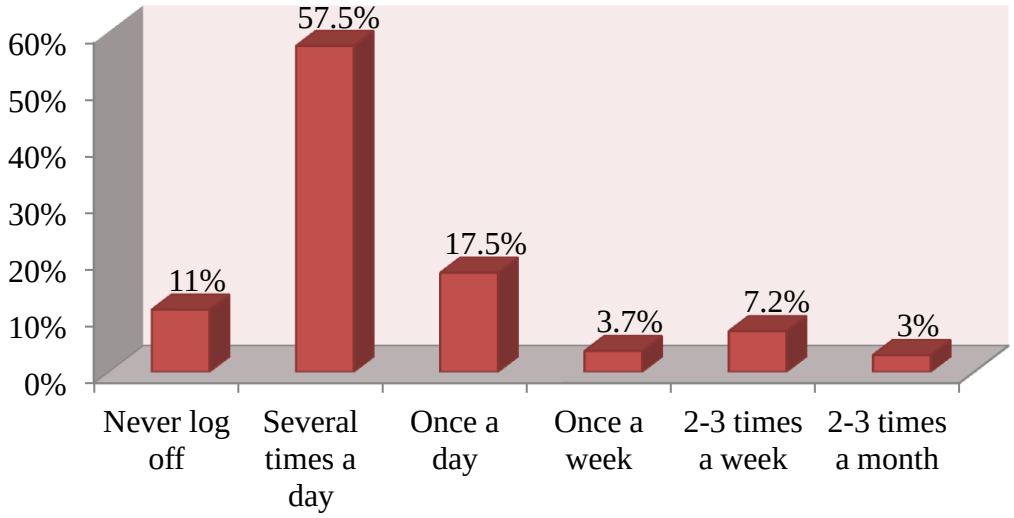


Figure 6.7: Frequency of Social Media Usage

iii. Average Length of Use

The average durations of use by respondents are presented in Figure 6.8. It is clear that the time duration most spent on social media per day is less than 1 hour (35.3%). This is followed by a similar percentage that use social media for between one to two hours (30.1%). Generally, these results demonstrate that the majority of the social media users

spend at least more than an hour. This denotes that most of them treat social media as part of their daily activities, which is why they logged in several hours every day.

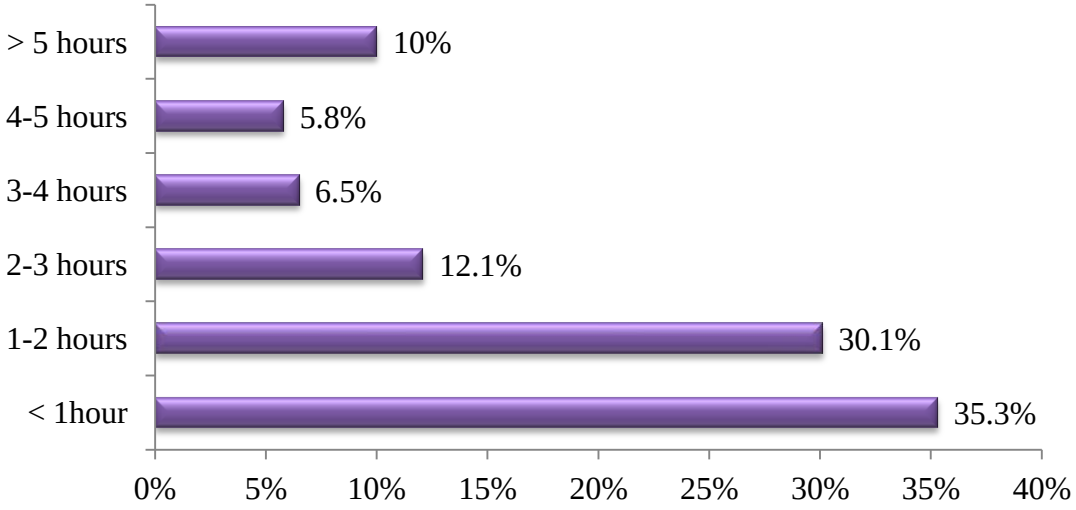


Figure 6.8: Duration of Log In Time Daily

iv. Intensity of Social Media Usage

Figure 6.9 reports the usage patterns of social media. The results indicate that 11.4% of the respondents have less social media usage while 71.7% have high usage of social media.

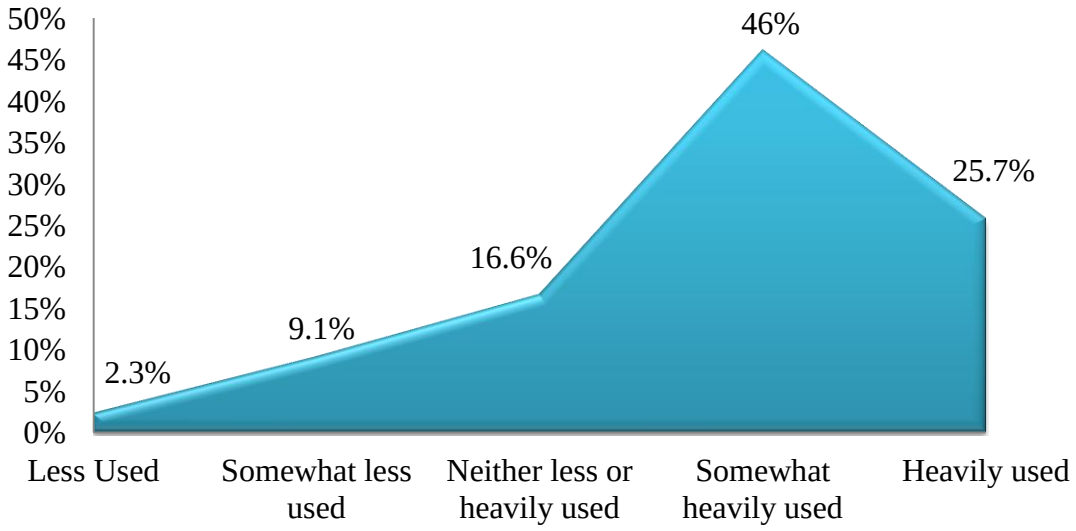


Figure 6.9: Social Media Usage Patterns

Furthermore, Figure 6.10 signifies the intensity of usage. It is noted that the group of respondents that have high social media usage consider themselves as an active social media user. The figure shows a higher tendency of the graph towards the active usage side accounting for 49.3%. From the results from both Figure 6.8 and Figure 6.9, it is suspected that those that have high social media usage and have categorised themselves as an active user have a lot of activities to be done in social media, which is presented in the subsequent section.

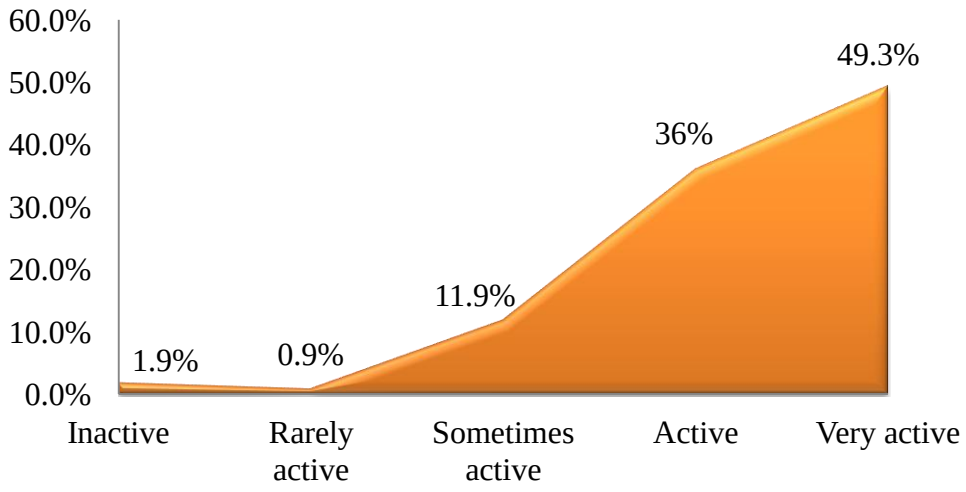


Figure 6.10: Social Media Intensity of Usage

v. Social Media Activities

Figure 6.11 depicts the activities that Malaysian consumers do every time they log into their social media. It is noted that the top five activities undertaken are (i) interacting with friends and others, (ii) updating social media status, (iii) uploading and sharing pictures and videos, (iv) checking the activities of others including friend's activities, and (v) searching for friends and other information.

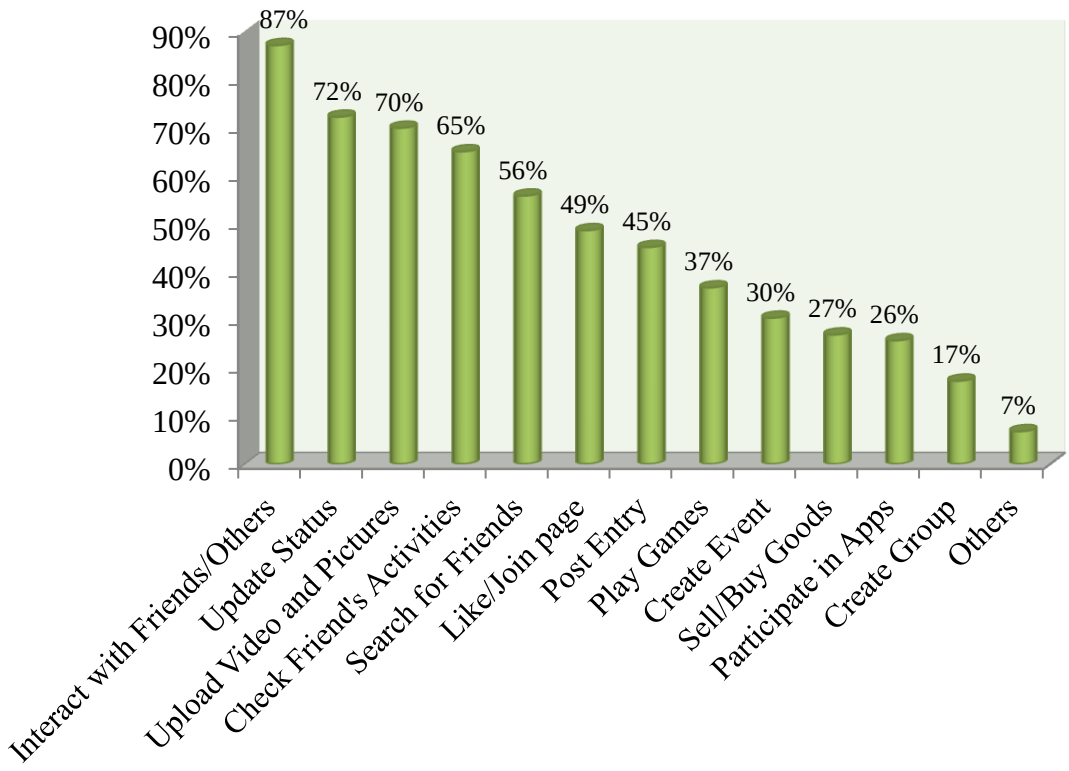


Figure 6.11: Social Media Activities for Malaysian

These findings suggest that social media users use social media heavily for socialising and personal interest. As indicated in Chapter Two, Kim et al. (2010) explain that among the uses and benefits of social media to individuals are (i) for communication, (ii) as a source of knowledge, (iii) participating in online interest group, (iv) as a source of entertainment, (v) venue for self-expression, and (vi) as online directory to find friends. These descriptive findings are in accordance with the explanation of Kim et al. concerning the uses and benefits of social media to the consumer.

vi. Social Media Access Devices

On the other hand, the trend of Malaysian consumers to access social media and their activities when they log in can be seen in Figure 6.12. It is noted that Laptop is the most favoured device that Malaysian consumers usually use to access their social media at

35.7%, while the second important device is personal computer at 21.7% and the third is smart phone at 19.6%.

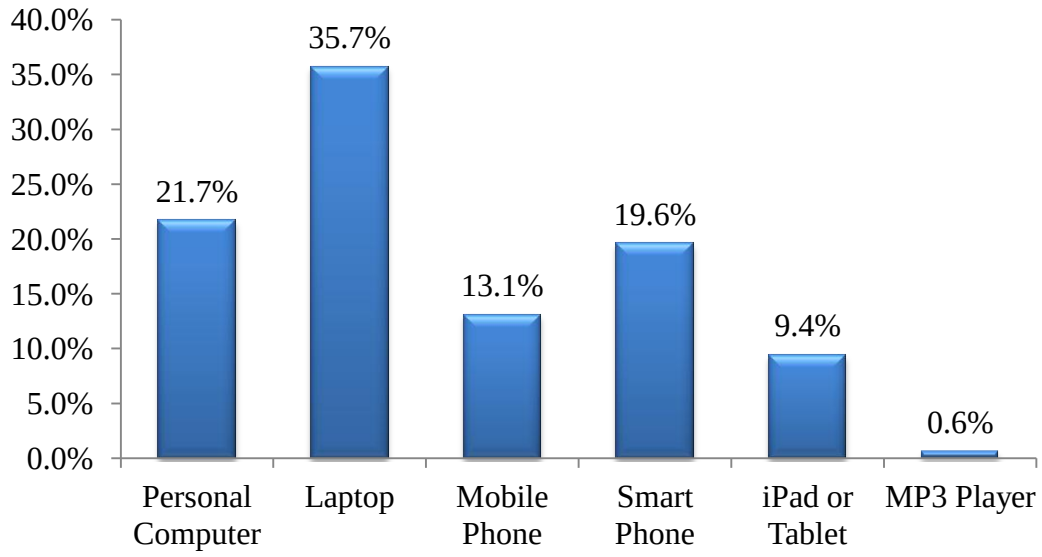


Figure 6.12: Social Media Access Devices

The results imply that the respondents are very comfortable with laptops and personal computers as a technological device that enables the respondents to log into their social media. Having said this, it indicates that their log in time would probably be when they are in the office as it is noted in the respondent demographics, the social media users come heavily from the working segment.

Despite smartphones being a device that has a social media application, the device is the third device used for accessing and logging into social media. This indicates that Malaysian consumers do not fully utilise their smartphone social media application from their smartphone device.

vii. Share of Social Media

Up until the survey was collected in 2011, the Malaysian share of social media usage came from the sites shown in Figure 6.13. The top five social media websites are Facebook, YouTube, Friendster, Twitter and MySpace. However, although these top five social media sites have the highest number of social media users, as also indicated by Experian Hitwise (2012), there are still new social media sites being introduced, bringing new concepts and interests to the social media users, for instance, Instagram (Social Networking Photo Sharing) and Keek (Social Networking Video Sharing).

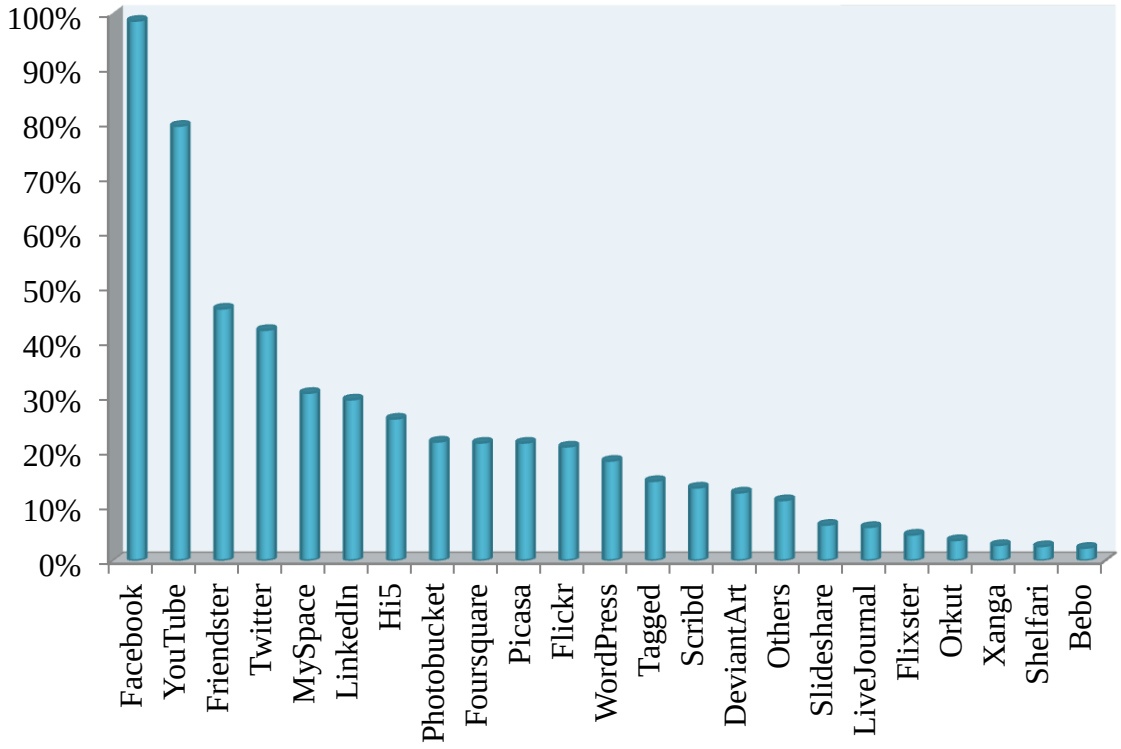


Figure 6.13: Malaysian Share of Social Media Site

These results imply that Facebook is still among the favourite social media sites, that, to some extent, has brought meaning to the consumer's life. Furthermore, not only has Facebook contributed to the change in individual propensity towards social media, it has also contributed to the change of marketing strategy inasmuch as most brands have

produced their own Facebook account to connect and communicate with their consumer, as explained in Chapter Two.

viii. Demographic Profile and Social Media Usage

In order to see the link between the important demographic variables in relation to social media usage and adoption in Malaysia, cross tabulation was run. This research used bivariate cross tabulation, which involved two variables. The clarity of interpretation between demographic and social media usage provides a stronger link that supports the research results on social media adoption and for important managerial action in the future. The greater insights of Malaysian consumer usage towards social media based on cross tabulation results are presented in Table 6.8.

Table 6.8: Cross Tabulations Between Demographics and Degree of Social Media Usage in Malaysia

	Low Usage	*Moderate Usage*	*Heavy Usage*	*TOTAL*
Male	9	21	**69**	100%
Female	14	13	**74**	100%
Below 20 years old	15	0	**84**	100%
20-24 years old	9	25	**66**	100%
25-34 years old	9	17	**75**	100%
35-44 years old	17	15	**68**	100%
45-54 years old	**50**	0	**50**	100%
Professional	11	7	**82**	100%
Manager	14	4	**82**	100%
Executive/Administrative	10	11	**78**	100%
Sales Personnel/Supervisor	12	26	**62**	100%
Teacher/Trainer	15	33	**51**	100%
Businessman	11	39	**50**	100%
Clerical/Production	14	7	**79**	100%
Technician	25	25	**50**	100%
Housewife	20	40	**40**	100%
Student	8	20	**72**	100%
Others	14	29	**57**	100%

From the cross tabulation in Table 6.8, it can be seen that based on gender, female respondents used social media heavily in that, when it is tabulated based on age, below

20 years old respondents are noted to use social media heavily. However, when it is crossed tabulated based on profession, the respondents under the category of professionals and managers used social media heavily. It can be concluded that social media adoption is on the rise and at a very fast speed, and that the usage is spread diversely across all walks of life. Therefore, in order to examine the underlying needs and gratifications that contribute to the speed of adoption the next section embarks on further multivariate statistical analysis.

In summary, the descriptive statistics have presented some significant findings about social media patterns and trends concerning Malaysian consumers, especially in terms of social media usage, intensity of usage, social media most visited website, favourite social media site and social media activities when they logged in. Implications and suggestions relating to these findings are elaborated upon in Chapter Seven.

6.3.7 Descriptive Statistics of Measurement Scales

In this part, the descriptive results of the measurement scale for each of the constructs of the research model are presented. As described in Chapter Four, the proposed model consists of five constructs: (i) Personal Needs (PERSONAL = TRN, ENJ, ENT, INT), (ii) Social Needs (SOCIAL = SIF, SIN), (iii) Tension Release Needs (TENSION = BLG, CSHIP, PLY, ESC), (iv) Innovation Characteristics (INNO = RA, COM, TRL, OBS, COX), and (v) Adoption (ADOPT). The items come from the previous literature and also from the results of the FGD. After going through validity assessment, as explained in Chapter Five, Section 5.3.2.6, the items are then converted into an online questionnaire and were sent out for data collection. Detailed descriptions of the items,

percentage of data for each scale, mean scores and standard deviations are reported in the section below. The skewness and kurtosis results are attached in Appendix B.

6.3.7.1 Results of Personal Needs

PERSONAL is the first order construct for four measured variables. PERSONAL consists of Trendiness, Enjoyment, Entertainment and Interactivity.

i. Trendiness (TRN)

The results of the descriptive analysis for TRN are shown in Table 6.9. A total of six items were measured. Based on the mean score for each item, social media users demonstrate agreement in that they perceived being part of social media as trendy (M = 3.03 – 3.96, SD = 0.650 – 1.096). They perceived themselves as the early adopters, which for them being a social media user represents the status of 'fashion' because for other people to see them using and operate new technology is trendy. Overall, the social media users have demonstrated their belief that social media shows a state of trendiness, that is why they adopt social media. Having said this, the descriptive analysis results confirm that social media users perceived themselves to be involved in the latest technological trend, which for them denotes lifestyle and status.

Table 6.9: Measures for Trendiness

	Trendiness	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
TRN1	I bother about latest technology	-	-	23.1	57.7	19.2	3.96	0.650
TRN2	I learn to operate new technology quickly	0.9	3.3	22.4	51.2	22.2	3.90	0.808
TRN3	Latest technology is useful	0.5	3.7	18.5	54.9	22.4	3.95	0.774
TRN4	New technology is fashionable	0.9	3.7	22.4	51.6	21.3	3.89	0.812
TRN5	I am usually among the first one to use new technology	6.8	28.0	30.6	24.5	10.0	3.03	1.096
TRN6	I like to be seen using social media	3.0	12.1	29.0	45.8	10.0	3.48	0.937

ii. Enjoyment (ENJ)

The descriptive analysis for ENJ, as depicted in Table 6.10, shows the mean score for nine items which has more weightage towards the agreement, despite some that have the tendency of leaning towards the neutral side of the agreement (M = 3.02 – 3.92, SD = 0.816 – 1.111). From the online survey, respondents were asked to indicate their level of active participation with adjectives that describe their affective feeling using a five-point Semantic Differential Scale, as explained in Section 6.3.7. A higher mean score indicates that social media users participate actively considering the adjective that appears on the questionnaire that describes their behaviour at the moment of using social media. It is noted that social media users perceived social media as fulfilling their enjoyment needs in that it is observed that social media for them gives contentment, satisfaction, keeps them happy, keeps them attentive, provides leisure, focus, is meaningful, rewarding and worth spending time with the medium. Overall, social media users have demonstrated their belief that social media fulfil their enjoyment needs.

Table 6.10: Measures for Enjoyment

	Enjoyment	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
ENJ1	It gives me contentment	2.1	23.6	42.1	20.3	11.9	3.16	0.988
ENJ2	it gives me sense of satisfaction	4.9	28.0	37.1	17.3	12.6	3.05	1.075
ENJ3	It keeps me happy	0.5	1.9	31.1	38.8	27.8	3.92	0.837
ENJ4	It attracts my attention	3.3	33.2	35.0	15.0	13.6	3.02	1.075
ENJ5	It keeps me at leisure	0.2	2.6	33.6	40.4	23.1	3.84	0.816
ENJ6	It is meaningful	4.7	29.0	33.4	18.5	14.5	3.09	1.111
ENJ7	It focuses on life	3.7	26.6	39.3	16.4	14.0	3.10	1.064
ENJ8	It is rewarding	3.7	21.5	42.3	18.9	13.6	3.17	1.034
ENJ9	It is worth spending time	3.7	29.4	35.3	22.9	8.6	3.03	1.010

iii. Entertainment (ENT)

The scale for ENT reflects the ability to satisfy the user's entertainment gratification. Respondents were asked to indicate the level of active participation, as explained in ENJ

earlier. The scale uses Semantic Differential that measures a five-point score. A total of eight items were measured. A higher mean score indicates active participation with the adjective appearing that explains their behaviour during the usage of social media. The results of the descriptive analysis are shown in Table 6.11. Based on the mean score for each item (M = 2.98 – 3.99, SD = 0.838 – 1.108), social media users demonstrate agreement that social media keeps them active, is entertaining, flexible, stylish, attractive, cool and unique. Further, social media users agreed that the experience of emotions that they received from adopting the social media as 'full of excitement'.

Table 6.11: Measures for Entertainment

	Entertainment	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
ENT1	It keeps me active	0.9	6.1	30.4	33.9	28.7	3.83	0.945
ENT2	It is entertaining	0.5	2.1	26.6	40.0	30.8	3.99	0.838
ENT3	It is flexible	4.0	36.4	29.7	17.1	12.9	2.98	1.100
ENT4	It is stylish	4.7	31.8	32.2	18.7	12.6	3.03	1.095
ENT5	It is attractive	4.4	29.2	33.4	18.5	14.5	3.09	1.108
ENT6	It is cool	4.0	29.4	32.9	18.7	15.0	3.11	1.108
ENT7	It is unique	0.7	2.8	38.1	34.3	24.1	3.78	0.867
ENT8	It is full of excitement	4.0	32.5	30.1	20.8	12.6	3.06	1.094

iv. Interactivity

Table 6.12 shows the results of the descriptive statistics for INT. A total of eight items were measured. On a scale of agreement, it is noted that the mean score (M = 3.51 – 4.05, SD = 0.676 – 0.878) demonstrates agreement that social media is a medium of interactivity. The measurement scales contain a description of social media needs, such as control, two-way communication, conversation, instantaneous information, easy navigation, effective and impromptu feedback. The items were fairly high compared to other items under the PERSONAL construct. Thus, it can be generally interpreted that social media users in this research exhibit relatively high agreement that social media is an interactive site.

Table 6.12: Measures for Interactivity

	Interactivity	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
INT1	It gives a great deal of control	0.5	11.9	36.0	39.0	12.6	3.51	0.878
INT2	It facilitates two-way communication	-	-	20.3	54.2	25.5	4.05	0.676
INT3	It enables conversation	0.5	5.4	15.7	55.1	23.4	3.96	0.804
INT4	It gives instantaneous information	0.9	3.5	22.4	50.0	23.1	3.91	0.820
INT5	It is easy to navigate	-	4.2	13.3	62.4	20.1	3.98	0.709
INT6	It is effective in gathering feedback	0.5	4.7	22.0	51.6	21.3	3.89	0.806
INT7	It processes feedback quickly	-	4.9	19.2	56.8	19.2	3.90	0.756
INT8	Social media is an interactive site	0.5	2.1	22.7	49.5	25.2	3.97	0.778

Having said that, the overall results for the PERSONAL construct indicate that social media users adopt social media because it gives them the feeling of trendiness, enjoyment, entertainment and interactivity. ***These needs are closely related to a social media user's value system, which upholds their desire to appear credible, confident and high self esteem, which supports Katz et al.'s (1974) explanation for the construct of Personal Needs in UGT.***

6.3.7.2 Results for Social Needs

i. Social Influence (SIF)

The SIF of social media towards the adopters is measured by seven items consisting of the issues relating to TRA that were discussed in Chapter Three. The respondents were asked to answer their level of agreement explaining their behavioural response towards social media, such as friend's recommendation to join social media, being in social media lets them stay in contact and connect with friends and people around the world; and, hence, the need arises to have an account in social media. As presented in Table 6.13, the social media users tend to agree that, in general, the SIF factor plays a role in their adoption behaviour (M = 2.13 – 3.98, SD = 0.645 – 0.934). However, the item 'friend's thinking that having them on social media would let them connect through

social media' has a slight disagreement in the mean score. This might indicate that this item is not so important compared to the rest of the items. Overall, these results imply that the social media users acknowledge that people around them (i.e. friends, family and acquaintances) influenced them to adopt social media.

Table 6.13: Measures for Social Influence

	Social Influence	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
SIF1	They recommend me to sign up	1.6	11.0	18.0	55.6	13.8	3.69	0.900
SIF2	They think having me around would let me stay in contact with them	0.5	2.1	21.0	54.4	22.0	3.95	0.745
SIF3	They think I should get connected through social media	25.0	47.9	18.0	7.2	1.9	2.13	0.934
SIF4	They think I should have an account in social media	-	2.6	19.9	64.7	12.9	3.88	0.645
SIF5	They think it would be great if my name can be found in their friend list	0.5	2.1	26.2	57.5	13.8	3.82	0.703
SIF6	I got to know about social media from people around me	-	4.2	15.4	58.4	22.0	3.98	0.737
SIF7	Overall, people around me have influenced me to use social media	1.6	9.1	20.1	54.7	14.5	3.71	0.881

ii. Social Interaction (SIN)

The descriptive statistics regarding SIN are reported in Table 6.14. A total of seven items were measured examining the agreement with various aspects of socializing relating to the social media SOCIAL construct. The mean score of each item generally indicates that respondents tend to explain interaction between two or more social media users, in which participants are aware of the relationship and group that they join belongs to the social media, which is also established due to mutually shared goals. The range of mean scores is M = 2.50 – 4.01 with SD = 0.667 – 0.968. Specifically, the item relating to 'participating in discussion' contains a slight disagreement that indicates that social media users infrequently participate in a discussion. The other items that explain about self expression, getting more point of views, meeting new people are those that

received a fair agreement level. Overall, social media users see social media as a place for socializing.

Table 6.14: Measures for Social Interaction

	Social Interaction	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
SIN1	I express myself freely	1.9	18.0	24.5	44.9	10.7	3.45	0.968
SIN2	I fit in a group of people that share the same interests	-	5.6	20.8	61.9	11.7	3.80	0.713
SIN3	I get more points of views	0.9	5.1	17.3	54.2	22.4	3.92	0.826
SIN4	I meet new people	1.4	9.1	18.7	46.3	24.5	3.83	0.947
SIN5	I participate in the discussions	18.7	28.7	36.7	15.4	0.5	2.50	0.981
SIN6	I view what other people talks about	0.5	1.6	20.6	56.3	21.0	3.96	0.723
SIN7	Social media is a place to socialize	-	1.9	16.1	61.2	20.8	4.01	0.667

Thus, based on these two variables under SOCIAL, it can be interpreted that the social media users in this research have demonstrated relatively high agreement in perceiving social media as fulfilling their social needs, specifically in influencing their social behaviour online. ***The findings generally correspond with and support the level of need to be part of a group and wanting to be recognised as part of the group as proposed by Katz et al. (1974) in UGT. The descriptive findings for SOCIAL is also in accordance with other research that found the significance of social connections, that is conjectured as a motivation for and benefit received from participating in online media; as explained in Chapters Three and Four.***

6.3.7.3 Results of Tension Release Needs

i. Belongingness (BLG)

Table 6.15 shows the results of the descriptive statistics for the BLG variable. The measurement scale contains nine items. Of all the items, 'I feel close to my friend' (M = 2.25, SD = 0.867) and 'I feel a sense of togetherness with my friend' (M =2.31, SD =

0.984) received a mean score below agreement, which suggests that social media users still think that without social media, their closeness with friends remains the same. Other than that, the items that explain attachment, sense of connectedness with friend and society, sense of brotherhood/sisterhood are relatively in agreement (M = 3.34 – 3.95, SD = 0.683 – 0.984).

Table 6.15: Measures for Belongingness

	Belongingness	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
BLG1	I feel attached to my friends	-	3.7	20.6	54.0	21.7	3.94	0.755
BLG2	I feel close to my friends	-	20.1	42.5	29.4	7.9	2.25	0.867
BLG3	I keep my friends close to me	-	2.3	22.2	59.3	16.1	3.89	0.683
BLG4	I feel a sense of togetherness with my friends	21.0	41.4	25.2	10.3	2.1	2.31	0.984
BLG5	I feel a sense of brotherhood/sisterhood with my friends	-	6.1	21.5	60.5	11.9	3.78	0.729
BLG6	I feel a sense of connectedness with society	0.2	2.3	19.4	58.2	19.9	3.95	0.711
BLG7	I feel a sense of connectedness with the world	0.5	2.3	20.3	55.1	21.7	3.95	0.745
BLG8	I feel connected with the world around me	-	5.1	20.1	54.2	20.6	3.90	0.777
BLG9	Social media is a place I feel I belong	2.8	15.9	36.2	35.0	10.0	3.34	0.955

ii. Companionship (CSHIP)

In Table 6.16, the results of the descriptive analysis of CSHIP are presented. A total of nine items were used to measure the level of agreement towards social media, where CSHIP denotes social media as a companion for the social media user. A higher mean score indicates that social media users are in agreement with the variables that explain the experience of likeness, friendship and relationship. The mean scores range between M = 2.35 and 3.98 with an SD between 0.728 and 1.105. Generally, the respondents are relatively agreed that social media enables them to build their own social network, expand their social network, feel less lonely, enables them to find friends, enables them to get through to friends that are hard to reach, meet new friends that has similarity with

social media user and enables them to reconnect with old friends. Only one item scored a low mean (M = 2.35), which indicates that 'friendship connection with friends that live far away' is not so important to the social media users. This could denote that social media users do not only use social media to connect with far away friends, and that there are other means of connection that enable them to stay in touch, which makes social media not so important in this context of connection.

Table 6.16: Measures for Companionship

	Companionship	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
CSHIP1	Enables me to build my own social network	-	4.2	17.8	56.8	21.3	3.95	0.747
CSHIP2	Enables me to expand my social network	0.2	1.4	23.1	53.0	22.2	3.96	0.728
CSHIP3	Enables me to reconnect with old friends	1.2	2.1	21.3	48.1	27.3	3.98	0.823
CSHIP4	Enables me to find friends	0.7	2.8	22.4	51.4	22.7	3.93	0.789
CSHIP5	Enables me to get through to friend that is hard to reach	0.7	4.0	20.3	53.3	21.7	3.91	0.798
CSHIP6	Enables me to connect with friends that live far away	24.5	38.1	18.0	16.6	2.8	2.35	1.105
CSHIP7	Enables me to meet others like me	0.5	6.5	22.2	57.5	13.3	3.77	0.778
CSHIP8	Enables me to feel less lonely	0.9	5.1	20.8	53.7	19.4	3.86	0.820
CSHIP9	Social media to me is a place for friendship	0.7	4.0	21.3	51.6	22.4	3.91	0.808

iii. Playfulness (PLY)

The PLY variable of social media is measured by eight items, as depicted in Table 6.17, which reveals the attitudinal outcomes of emotion, pleasure and satisfaction resulting from experiencing social media. The respondents were asked to indicate the level of agreement relating to how social media users find social media after experiencing it. This describes the amusement feeling, arousing imagination, enjoyable, fun, online exploration, feeling of happiness and stimulate curiosity. Overall, the mean score is between M = 2.17 and 3.96 with SD = 0.738 – 0.917. The item that indicates less agreement is 'fun', which indicates that 'fun' might not really explain the feeling of

playfulness when using social media, and that it probably is better as a point to explain their state of enjoyment.

Table 6.17: Measures for Playfulness

	Playfulness	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
PLY1	Social media amuses me	0.9	10.5	25.5	56.1	7.0	3.58	0.808
PLY2	Using social media arouses my imagination	1.9	11.0	33.6	45.3	8.2	3.47	0.864
PLY3	Using social media is enjoyable	0.5	2.6	21.5	56.3	19.2	3.91	0.738
PLY4	Using social media is fun	19.6	51.6	21.0	7.2	0.5	2.17	0.843
PLY5	Using social media leads me to online exploration	0.7	2.6	20.1	53.5	23.1	3.96	0.773
PLY6	Using social media makes me happy	0.7	1.9	23.8	50.9	22.7	3.93	0.774
PLY7	Using social media stimulates my curiosity	0.9	3.0	25.0	48.4	22.7	3.89	0.819
PLY8	Social media is a place to be playful	2.6	7.9	25.0	49.3	15.2	3.67	0.917

iv. Escapism (ESC)

The scale of ESC consists of eight items reflecting the perception of usefulness of the technology and the impression of entertainment that led the social media user to escape from the real world. Table 6.18 shows the results of the descriptive analysis for escapism. Based on the overall mean score (M = 2.76 – 3.88, SD = -0.827 – 1.266), the items explain social media as a medium that enables the social media user to get away from their family, problems, hang out with friends online, forget about commitments, passing time all of which help them to relax. Nevertheless, the item that explains 'getting away from family', indicates lower agreement, which explains that social media users do not consider social media as a place to escape from family, and that there might be other means of escapism that social media users find that explain this item better.

Thus, it can be interpreted that TENSION towards adopting social media is indeed important in that it explains social media users' organisation of experience towards grandiosity, idealization, alter ego and belongingness. Moreover, the relationship

between the self (social media user) and the self object (social media) conception helps in speeding up social media adoption. ***The findings generally correspond with and support the level of need as a place for tension reliever, as proposed by Katz et al. (1974) in UGT.***

Table 6.18: Measures for Escapism

	Escapism	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
ESC1	It enables me to get away from family	15.9	33.6	22.7	14.3	13.6	2.76	1.266
ESC2	It enables me to get away from my problems	8.6	22.2	28.5	35.3	5.4	3.07	1.065
ESC3	It enables me to gossip with friends without meeting them	1.9	4.2	24.3	49.3	20.3	3.82	0.867
ESC4	It enables me to hang out with friends without meeting them	1.4	6.3	17.5	52.8	22.0	3.88	0.872
ESC5	It makes me forget about other commitments	8.4	21.0	24.5	35.5	10.5	3.19	1.136
ESC6	It passes my time away, particularly when I am bored	1.6	3.5	23.4	49.5	22.0	3.87	0.851
ESC7	It relaxes me	o.9	8.6	25.2	53.7	11.4	3.66	0.827
ESC8	Social media is a place for escapism	4.0	11.0	37.1	34.8	13.1	3.42	0.983

6.3.7.4 Results of Innovation Characteristics

i. Relative Advantage (RA)

The RA of technology innovation is measured by five items that consist of the idea of social media innovation being better than the rest of technology. A total of five items were measured. The social media users were asked to indicate their level of agreement towards the degree of relative advantage social media has ranging from the ability to expand circle of friends, social network, control, improve life productivity and quality of day. Based on the descriptive analysis, as depicted in Table 6.19, the mean scores are noted between M = 3.46 – 4.07 with SD = 0.649 – 0.893. These results imply that social media relative advantage is an important innovation characteristic that helps to increase the speed of social media adoption.

Table 6.19: Measures for Relative Advantage

	Relative Advantage	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
RA1	It expands my circle of friends	-	1.9	14.7	63.6	19.9	4.01	0.649
RA2	It expands my social network	-	1.4	13.8	61.4	23.4	4.07	0.651
RA3	It gives my life greater control	0.9	9.1	28.3	48.6	13.1	3.64	0.856
RA4	It improves my life productivity	2.8	11.2	31.1	47.2	7.7	3.46	0.893
RA5	It improves the quality of my day	2.3	9.3	28.3	51.9	8.2	3.54	0.861

ii. Compatibility (COM)

Table 6.20 depicts the results of the descriptive statistics for social media COM. The measurement scale contains five items. Respondents were asked to indicate the level of agreement based on social media compatibility in letting the medium fit into the social media user's aspects of life, fits with other social media, fits with other technologies and fits with the way how the social media user likes to live. Basically, the mean score ranges between M = 2.18 and 3.94 with SD = 0.683 – 0.847 showing relative agreement that social media is indeed an innovation that is compatible with their social cultural values and beliefs. However, the item that explains 'it fits into lifestyle' received disagreement mean on the mean score which indicates that not all social media users think that social media is part of their lifestyle, whereby the interpretation of lifestyle is more than only having social media.

Table 6.20: Measures for Compatibility

	Compatibility	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
COM1	It fits into my lifestyle	20.6	48.6	23.8	6.5	0.5	2.18	0.847
COM2	It fits with all aspects of my life	0.9	7.9	38.1	43.5	9.6	3.53	0.811
COM3	It fits with other social media	0.5	1.9	34.8	53.5	9.3	3.69	0.683
COM4	It fits with other technologies	1.2	3.0	21.7	50.5	23.6	3.92	0.822
COM5	It fits with the way I like to live	1.4	3.0	21.3	48.4	25.9	3.94	0.847

iii. Trialability (TRL)

The descriptive statistics on TRL are reported in Table 6.21. A total of five items was measured by examining the agreement that explains the trial period, which allows social media users to find out its benefits under trial conditions. It is noted that the mean scores are between M = 3.10 and 4.02 with SD = 0.718 – 0.882. Higher means were noted for the item that explains that 'social media gives the opportunity to try various applications', which highlights the advantages of social media, as explained in Chapter Two.

Table 6.21: Measures for Trialability

	Trialability	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
TRL1	It gives the opportunity to try various applications in social media	0.9	3.0	18.5	48.4	29.2	4.02	0.827
TRL2	It gives a trial period over its various uses	0.7	11.4	50.5	35.0	2.3	3.27	0.718
TRL3	It gives a trial period to sign up	2.6	12.6	52.6	30.4	1.9	3.16	0.763
TRL4	It has a trial basis	3.5	15.0	51.4	28.7	1.4	3.10	0.791
TRL5	It is easy to sign up without having to pay for it	1.6	4.4	21.0	47.9	25.0	3.90	0.882

iv. Observability (OBS)

Table 6.22 shows the results of the descriptive statistics of social media OBS. A total of five items were used to see whether the social media innovation is noticeable and visible to others. This measurement scale contains an explanation that social media users have towards the medium as recommendable, noticeable and the usefulness of the system. Based on the mean scores, overall, the respondents expressed fair agreement that social media technology innovation is observable with M = 3.65 – 3.98 with SD 0.621 – 0.902.

Table 6.22: Measures for Observability

	Observability	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
OBS1	It is recommendable	-	1.4	16.1	65.7	16.8	3.98	0.621
OBS2	The advantages of using social media can be noticed by others	-	2.3	19.2	64.5	14.0	3.90	0.645
OBS3	The disadvantages of using social media can be noticed b others	2.1	9.6	22.7	52.3	13.3	3.65	0.902
OBS4	The excitement of using social media can be noticed by others	-	4.7	21.5	61.7	12.1	3.81	0.700
OBS5	The usefulness of the system is highly observable	-	1.4	26.4	59.6	12.6	3.83	0.648

v. Complexity (COX)

The descriptive results for social media COX are displayed in Table 6.23. This variable comprises five items that describe the degree of complexity of the social media. In technology innovation, complexity is considered as a barrier for technology acceptance. Having said this, the items describe whether social media can fit in other mechanical operations, navigation, complication, difficulty to understand and to use. The mean scores for all items are considered to be under the disagreement scale that explains M = 2.16 – 2.75 with SD .850 – 1.105. This indicates that social media complexity is not noticeable by the social media users, hence making social media rather simple to use.

Table 6.23: Measures for Complexity

	Complexity	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
COX1	It deals with many mechanical operations	17.3	21.3	34.8	22.9	3.7	2.75	1.105
COX2	It involves too many steps when navigate	17.8	30.1	34.1	14.7	3.3	2.56	1.047
COX3	It is complicated	15.7	54.2	20.1	9.6	0.5	2.25	0.850
COX4	It is difficult to understand	17.1	55.4	17.5	9.6	0.5	2.21	0.854
COX5	It is difficult to use	21.3	52.1	16.6	9.6	0.5	2.16	0.883

From the results, it can be concluded that the social media users who participated in this research agreed that INNO plays a significant role in encouraging them to increase their

speed of adoption. In addition, the descriptive statistics for this section shows agreement in their attitude towards the technology, such as liking, finding it useful, helpful and easy to use, thus encouraging them to use the innovation (i.e. social media) at a regular basis. ***The results also imply that, generally, the social media users are satisfied with the innovation characteristics that the social media has and the overall advantage that they received from adopting the innovation. Thus, this influences their decision to continue to use social media and increase their usage. The findings correspond with and support Rogers (2003) Diffusion of Innovation Theory.***

6.3.7.5 Results of Social Media Adoption

Descriptive statistics for the ADOPT are reported in Table 6.24. A measurement scale comprising eight items is used to assess the actual level of social media adoption. Similar to the previous scale, the respondents were asked to indicate their level of agreement with each item on a five-point Likert scale. As shown in Table 6.24, the mean scores of the measurement items were between M = 3.65 and 4.03 with SD = 0.614 – 0.905. The social media users in this research indicate agreement that they intend to continue using social media due to its benefits. They also claimed that they were satisfied with social media, hence making them an active user. Further, they predicted that their future social media usage will increase in that social media has substantially impacted and changed their life. As for overall evaluation, the social media users felt that they had adopted social media due to its usefulness, and, therefore, are satisfied and will continue using it.

Table 6.24: Measures for Adoption

	Adoption	*Response Scale (%)*					***Mean***	***SD***
		(1)	(2)	(3)	(4)	(5)		
ADOPT1	My usage has benefited my life	-	1.4	22.2	61.2	15.2	3.90	0.649
ADOPT2	My usage has impacted my life	0.5	3.0	26.6	56.5	13.3	3.79	0.722
ADOPT3	My usage has substantially changed my life	1.4	6.5	31.5	46.3	14.3	3.65	0.853
ADOPT4	My usage is extensive, therefore I continue using it	0.9	4.7	25.5	55.6	13.3	3.76	0.775
ADOPT5	My usage is active therefore I am a frequent user of social media	2.1	6.8	19.6	51.6	19.9	3.80	0.905
ADOPT6	I expect my social media usage to increase in the future	0.5	6.3	24.5	51.6	17.1	3.79	0.816
ADOPT7	Overall, I adopt using social media because of its usefulness	0.5	3.3	19.4	52.6	24.3	3.97	0.781
ADOPT8	Overall, I am satisfied with my social media usage	-	1.4	13.3	66.6	18.7	4.03	0.614

Having reported all the responses, the mean score and standard deviations, for all five constructs: ***(i) Personal Needs (Trendiness, Enjoyment, Entertainment, Interactivity), (ii) Social Needs (Social Influence, Social Interaction), (iii) Tension Release Needs (Companionship, Belongingness, Playfulness, Escapism), (iv) Innovation Characteristics (Relative Advantage, Compatibility, Trialability, Observability, Complexity), and (v) Adoption, the descriptive analysis of the research measurement is completed at this point.*** The following section proceeds with more important issues in research, namely, the testing of assumptions, factor analysis, validity test, reliability test and structural model analysis.

6.3.8 Testing of Assumptions

The focus of the preceding section was to report the findings of the descriptive analysis, while this section presents rigorous quantitative analysis of the survey data. Before the analysis is performed, assumptions that are necessary to be fulfilled by the data set are tested. The first step was to run a check on the normality, correlations, linearity,

multicollinearity, singularity, and outliers, as discussed in Chapter Five, Section 5.4.1 onwards. The need to test for multivariate assumptions is to avoid the complexity of the data that can lead to the potential distortions and biases as well as the complexity of the analyses and results that may suppress the indicators of assumption if the multivariate assumptions are violated (Hair et al., 2010).

6.3.8.1 Normality Test

The most fundamental assumption in multivariate analysis is the normality test, which refers to the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution (Hair et al., 2010). It examines the symmetric nature and peakedness or flatness, for the data set using the shape descriptors, skewness and kurtosis as elaborated upon in Chapter Five, Section 5.4.2. The skewness values for the research measurement items range from -0.36 to +0.83, which is acceptable within the recommended range from -1 to +1 (Hair et al., 2010). In addition, the kurtosis ranges from -0.009 to 0.953, which is also acceptable within the recommended limit from -2 to +2 (Coakes & Steed, 2003). Table 6.25 summarises the results for the skewness and kurtosis; the detailed results can be found in Appendix B.

Table 6.25: Results of Skewness and Kurtosis

Condition	*Result*	*Requirements*	*Reference*
Skewness	-0.36 to +0.83	-1 to +1	Hair et al. (2010)
Kurtosis	-0.009 to 0.953	-2 to +2	Coakes & Steed (2003)

The skewness and kurtosis results presented in Table 6.25 show that the positive value of skewness indicates a pile of scores on the left of the distribution whereas the negative value indicates a pile on the right of the distribution. At the same time, the positive

value of kurtosis indicates a pointy and heavy-tailed distribution, whereas the negative value indicates a flat and light-tailed distribution (Coakes & Steed, 2003; Field, 2009; Hair et al., 2010). ***Since the ranges of skewness and kurtosis fall within the given threshold, as specified in Table 6.25, it is considered that the data are normally distributed.***

6.3.8.2 Multicollinearity and Singularity

Multicollinearity is a condition in which independent variables (IV) are very highly correlated, i.e. at ≥0.90, and singularity is when the IVs are perfectly correlated and one IV is a combination of one or more of the other IVs. As the calculation of the regression coefficients is done through matrix inversion, if singularity exists, the inversion is impossible, and if multicollinearity exists the inversion is unstable. As a result, the IVs will be redundant with one another.

The test of multicollinearity was performed using SPSS and checked using the variance inflating factor (VIF), tolerance and condition index (Pallant, 2005). The calculated values are presented in Table 6.26. ***A visual inspection of these results indicates that the problem of multicollinearity is not to be expected as VIF values are less than 10, tolerance values are < 1.0 and condition indexes are <30.***

Table 6.26: Test on Multicollinearity

Variables Tested	*Variance Inflating Factor (VIF)*	*Tolerance*	*Condition Index*
PERSONAL → INNO	1.247	0.802	15.314
SOCIAL → INNO	1.307	0.765	18.217
TENSION → INNO	1.077	0.928	23.498
INNO → ADOPT	1.000	1.000	16.500
PERSONAL → ADOPT	1.247	0.802	15.314
SOCIAL → ADOPT	1.307	0.765	18.217
TENSION → ADOPT	1.077	0.928	23.498

6.3.8.3 Correlation and Linearity

Following the procedure outlined in Chapter Five, section 5.4.3, a visual inspection of the correlation matrix between the measurement items was performed and the results show that all *r* coefficients are positive and that most of the values are above 0.30, which shows medium to large strength and significant at 0.05. Very few values are above 0.70, which dispels the fear of multicollinearity. The value of 0.30 is the cut off point for many statistical analyses, as suggested by Tabachnick & Fidell (2007), and Cohen (1988).

The final assumption to be examined is the linearity of the relationships. In the case of individual variables, linearity shows the patterns of association between each pair of variables and the ability of the correlation coefficient to adequately represent the relationship. Concerning the linearity relationship of variables, as suggested by Hair et al. (2010) the P-P plots are checked. ***A visual inspection of the P-P Plots in Figure 6.14 indicates that the items from the predictor variables are linearly related to those from the criterion variables, and that non-linear relationships are not presented. In addition, no outliers are detected, meaning that the model is not biased because it does not affect the values of the estimated regression coefficients.***

In the Normal Probability Plot, as shown in Figure 6.14, the points lie in a reasonably straight diagonal line from bottom to top right. As for linearity, this means that there is a straight line relationship between the IVs and the DV. This assumption is important because regression analysis only tests for a linear relationship between the IVs and the DV. This also suggests that no major deviations from normality are noted. ***Thus,***

checking that data are normally distributed should cut down on the problem of heteroscedasticity.

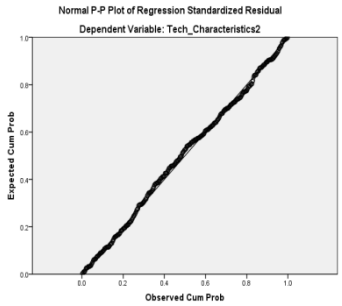
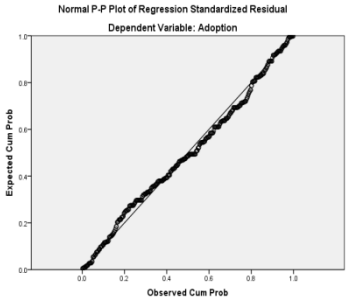
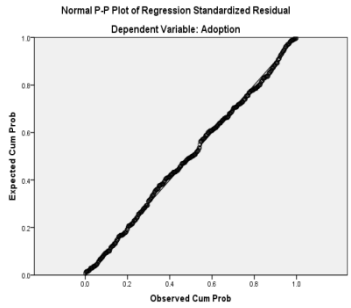
		
PERSONAL/SOCIAL/ TENSION → INNO	INNO → ADOPT	PERSONAL/SOCIAL/ TENSION → ADOPT

Figure 6.14: Normal P-P Plots of Regression Standardised Residuals

6.3.9 Reliability of Measurement Scales

The preceding section tested the multivariate assumption, which confirmed that all assumptions were met and not violated. This section then follows with the reliability of the measurement scales. The measurement scales will then be further purified using factor analysis for dimension reduction. When factor analysis is done, the factorised data are used for the assessment of the measurement model and structural model. Later in this stage, the mediation effect is tested to see the strength of the mediating variables on the assessment model. Finally, the hypotheses will be tested.

Table 6.27 presents the initial reliability examination of the measurement scales. The Cronbach's alpha coefficient was calculated using SPSS along with the item-to-total correlations. The Cronbach's alpha for each construct is shown to be above 0.70 showing a high degree of internal consistency. The ENJ scale shows the highest alpha

value at 0.935, while the TRL indicates the lowest alpha at 0.746. In total, 16 items were deleted. The item deletion process was performed in order to increase the alpha value. Items were deleted based on item-to-total correlations of less than 0.70 (Malhotra, 2007). The items were deleted one at a time, starting with the lowest item-to-total correlations, and the reliability for the new alpha value re-tested. However, more caution regarding the deleted items has been taken in further analysis. In order to make sure that constructs with low Cronbach's alpha do not cause a problem, a more stringent test of reliability was taken. This involved assessing the amount of variance captured by construct measures in relation to the amount of variance due to measurement error (Fornell & Larcker, 1981).

Table 6.27: Initial Reliability Examination of Measurement Scales

	Variables	*Code*	*Number of Items*	*Item-Total Correlation*	*Cronbach's Alpha*
1	**TRN**	TRN1	6	0.643	
		TRN2		0.657	
		TRN3		0.511	
		TRN4		0.325	
		TRN5		0.532	
		TRN6		0.564	
					0.782
2	**ENJ**	ENJ1	8	0.805	
		ENJ2		0.837	
		ENJ3		0.450	
		ENJ4		0.812	
		ENJ5		0.524	
		ENJ6		0.831	
		ENJ7		0.862	
		ENJ8		0.825	
		ENJ9		0.810	
					0.935
3	**ENT**	ENT1	8	0.470	
		ENT2		0.476	
		ENT3		0.753	
		ENT4		0.806	
		ENT5		0.831	
		ENT6		0.834	
		ENT7		0.826	
		ENT8		0.543	
					0.905

	Variables	*Code*	*Number of Items*	*Item-Total Correlation*	*Cronbach's Alpha*
4	**INT**	INT1	8	0.432	
		INT2		0.555	
		INT3		0.551	
		INT4		0.604	
		INT5		0.636	
		INT6		0.720	
		INT7		0.685	
		INT8		0.676	
					0.857
5	**SIF**	SIF1	6	0.578	
		SIF2		0.688	
		SIF3		0.646	
		SIF4		0.624	
		SIF5		0.618	
		SIF6		0.457	
					0.843
6	**SIN**	SIN1	6	0.567	
		SIN2		0.708	
		SIN3		0.590	
		SIN4		0.389	
		SIN5		0.584	
		SIN6		0.512	
					0.819
7	**BLG**	BLG1	9	0.764	
		BLG2		0.648	
		BLG3		0.649	
		BLG4		0.653	
		BLG5		0.735	
		BLG6		0.762	
		BLG7		0.606	
		BLG8		0.686	
		BLG9		0.765	
					0.909
8	**CSHIP**	CSHIP1	9	0.712	
		CSHIP2		0.577	
		CSHIP3		0.562	
		CSHIP4		0.405	
		CSHIP5		0.631	
		CSHIP6		0.534	
		CSHIP7		0.613	
		CSHIP8		0.714	
		CSHIP9		0.639	
					0.865
9	**PLY**	PLY1	8	0.454	
		PLY2		0.524	
		PLY3		0.682	
		PLY4		0.515	
		PLY5		0.650	
		PLY6		0.618	
		PLY7		0.528	
		PLY8		0.484	
					0.824

	Variables	*Code*	*Number of Items*	*Item-Total Correlation*	*Cronbach's Alpha*
10	**ESC**	ESC1	8	0.527	
		ESC2		0.663	
		ESC3		0.437	
		ESC4		0.388	
		ESC5		0.540	
		ESC6		0.535	
		ESC7		0.595	
		ESC8		0.646	
					0.817
11	**RA**	RA1	5	0.594	
		RA2		0.559	
		RA3		0.605	
		RA4		0.749	
		RA5		0.755	
					0.837
12	**COM**	COM1	5	0.748	
		COM2		0.690	
		COM3		0.670	
		COM4		0.709	
		COM5		0.440	
					0.842
3	**TRL**	TRL1	5	0.316	
		TRL2		0.702	
		TRL3		0.635	
		TRL4		0.703	
		TRL5		0.238	
					0.746
14	**OBS**	OBS1	5	0.566	
		OBS2		0.669	
		OBS3		0.429	
		OBS4		0.763	
		OBS5		0.655	
					0.810
15	**COX**	COX1	5	0.488	
		COX2		0.661	
		COX3		0.813	
		COX4		0.777	
		COX5		0.749	
					0.862
16	**ADOPT**	ADOPT1	8	0.668	
		ADOPT2		0.731	
		ADOPT3		0.749	
		ADOPT4		0.787	
		ADOPT5		0.750	
		ADOPT6		0.799	
		ADOPT7		0.679	
		ADOPT8		0.645	
					0.915

The remaining items from the Table 6.27 shows a list of reliable items that are ready for the next step of factor analysis.

6.3.10 Factor Analysis

Factor analysis is used to search for structure among the variables by defining factors in terms of sets of variables in which every variable should load on a factor to which it belongs (Hair et al., 2010). Since the research adopted items from various studies, as well as developing new items, factor analysis is necessary to determine the underlying structure of the proposed variables before it proceeds with subsequent analysis.

For this research, factor analysis was used to achieve data reduction by identifying the representative variables from a much larger set of variables for use in subsequent multivariate analyses and/or create a new set of variables, much smaller in number, to partially or completely replace the original set of variables, whichever is necessary from this analysis. Thus, estimates of the factors and the contributions of each variable to the factor loadings are all required for this analysis.

Firstly, suitability of the data set for factor analysis was examined. The conditions for suitability of the data for factor analysis were checked according to the procedure suggested in Chapter Five, Section 5.4.4. The Kaiser-Meyer-Olkin (KMO) measure verifies the sampling adequacy for the analysis indicating the proportion of variance in the variables, which is regarded as common variance, while Bartlett's test of sphericity (BTS) is a statistical test for the presence of correlations among the variables (Nunnally and Bernstein, 1994).

According to Hair et al. (2010), in examining the suitability of the factor, KMO indices should be higher than 0.50 and BTS should be significant at p = 0.000. If these conditions are met, the correlations between items are considered sufficient and significant. Table 6.28 indicates that the KMO indices are at 0.906 and the BTS are all significant at p value 0.000. The measure of sampling adequacy index ranges from 0 – 1. When it reaches 1, it explains that each variable is perfectly predicted without error by the other variables. The measure can be interpreted using the following guidelines: ≥0.90 explains marvellous, 0.80 explains meritorious, 0.70 explains middling, 0.60 explains mediocre, 0.50 explains miserable and ≤0.50 explains unacceptable (Hair et al., 2010). ***The result of the measure of sampling adequacy test for this research indicates a marvellous level of prediction. Therefore, these results confirm the suitability of the data for factor analysis.***

Table 6.28: Examination of Variables for Suitability of Factor Analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		*0.906*
Bartlett's Test of Sphericity	Approx. Chi-Square	31432.901
	Df	3828
	Sig.	0.000

After confirming that the data were suitable to run for further analysis, the items were factor analysed using principal component analysis (PCA). The varimax rotation with Kaiser-normalisation was used to clarify the factors (Pallant, 2005; Hair et al., 2010). After a visual inspection of the loadings, items with loadings less than the threshold of 0.5 (Pallant, 2005; Hair et al., 2010) on the construct that they were supposed to measure, as well as a few items that loaded on variables that they were not supposed to measure were discarded.

All three approaches for retaining factors were considered using Kaiser's Criterion, Scree Plots and the Variance Extracted approach. Only variables that fulfil all of these criterions were retained for further analysis.

A total of 109 items were factor analysed. The factor analysis indicates that the pool of items captured 16 distinct factors including the dependent variable. Upon inspecting the factor solution and the item loadings, a total of 21 items were deleted and no longer considered for subsequent analyses. These items were either cross loadings or had loadings below 0.50 (Pallant, 2005; Hair et al., 2010). Then the remaining 88 items were again subjected to reliability test to ensure the scale was reliable for each factor. Table 6.29 shows the results of the factor analysis.

In order to ensure that the 16 factors extracted from this study explain at least a specified amount of variance, the percentage of variance criterion approach was used for validation. Table 6.30 gives a summary of the eigenvalues, percentages of variance explained and cumulative variance explained by the factor solution. The extraction sums of squared loadings group gives information regarding the extracted factors or components. For principal components extraction, these values are the same as those reported under the initial eigenvalues. The 16-factor solution accounted for 69.84% of the total variance, as shown in Table 6.30.

Table 6.29: The Results of Factor Analysis

Factor 1	ENT	*Reliability*	**Factor 8**	ESC	*Reliability*
ENT4	.889	0.972	ESC2	.770	0.843
ENJ7	.879		ESC8	.753	
ENT8	.878		ESC1	.716	
ENT5	.877		BLG9	.711	
ENT6	.872		PLY8	.683	
ENJ8	.871		**Factor 9**	CSHIP	0.784
ENJ6	.860		BLG7	.780	
ENJ9	.854		BLG4	.727	
ENJ2	.831		CSHIP2	.723	
ENJ8	.819		PLY4	.645	
ENT3	.799		**Factor 10**	PLY	0.703
ENJ1	.774		CSHIP6	.709	
Factor 2	INT	0.852	PLY5	.621	
INT5	.798		PLY7	.566	
INT6	.791		**Factor 11**	COM	0.880
INT4	.740		COM2	.825	
INT7	.706		RA3	.741	
INT3	.639		COM5	.703	
INT8	.593		RA5	.701	
Factor 3	TRN	0.825	COM1	.696	
TRN4	.777		RA4	.659	
INT1	.736		COM4	.632	
TRN1	.731		**Factor 12**	COX	0.875
TRN2	.673		COX3	.901	
TRN5	.632		COX4	.881	
Factor 4	ENJ	0.797	COX5	.846	
ENT1	.712		COX2	.732	
ENJ5	.709		COM1	.675	
ENJ3	.706		COX1	.556	
ENT7	.616		**Factor 13**	OBS	0.809
Factor 5	SIN	0.807	OBS4	.795	
SIN1	.764		OBS2	.764	
SIN4	.744		OBS3	.650	
SIN3	.738		OBS5	.612	
SIN2	.725		OBS1	.597	
SIN7	.638		**Factor 14**	TRL	0.896
Factor 6	SIF	0.779	TRL3	.880	
SIF4	.805		TRL4	.876	
SIF1	.787		TRL2	.847	
SIF5	.725		**Factor 15**	RA	0.876
SIF7	.643		RA2	.801	
Factor 7	BLG	0.902	RA1	.800	
BLG8	.719		**Factor 16**	ADOPT	0.915
BLG1	.713		ADOPT4	.859	
BLG3	.712		ADOPT6	.848	
BLG6	.709		ADOPT5	.822	
BLG5	.708		ADOPT3	.821	
CSHIP1	.705		ADOPT2	.795	
CSHIP3	.627		ADOPT7	.756	
PLY1	.569		ADOPT8	.724	
CSHIP5	.533		ADOPT1	.715	

In a good factor analysis, a few factors explain a substantial portion of the variance and the remaining factors explain relatively small amounts of variance, which is the case in these results. Although there is no absolute threshold that can be adopted, in social sciences, where information is often not precise as in natural sciences, a combination of factors that accounts for 60 per cent of the total variance (and in some cases is even less) is deemed satisfactory (Hair et al., 2010).

Table 6.30: Eigenvalues and Total Variance Explained

Factor	*Initial Eigenvalues*			*Extraction Sums of Squared Loadings*			*Rotation Sums of Squared Loadings*
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	24.292	27.605	27.605	24.292	27.605	27.605	10.628
2	8.145	9.255	36.860	8.145	9.255	36.860	7.156
3	4.642	5.275	42.135	4.642	5.275	42.135	5.148
4	3.775	4.289	46.424	3.775	4.289	46.424	4.521
5	3.010	3.421	49.845	3.010	3.421	49.845	4.360
6	2.285	2.597	52.442	2.285	2.597	52.442	4.032
7	2.120	2.409	54.851	2.120	2.409	54.851	3.245
8	1.933	2.196	57.047	1.933	2.196	57.047	3.067
9	1.840	2.091	59.138	1.840	2.091	59.138	2.975
10	1.675	1.903	61.041	1.675	1.903	61.041	2.974
11	1.519	1.726	62.767	1.519	1.726	62.767	2.852
12	1.451	1.648	64.415	1.451	1.648	64.415	2.806
13	1.317	1.497	65.912	1.317	1.497	65.912	2.097
14	1.249	1.420	67.332	1.249	1.420	67.332	1.996
15	1.138	1.293	68.625	1.138	1.293	68.625	1.902
16	1.071	1.217	69.841	1.071	1.217	69.841	1.466

The results show that the first factor (variable) accounts for a large percentage of the total variance, that is, 27.6% and the 16 factors that are extracted account for 69.84% of the total variance. ***Based on these findings, it can be concluded that all 16 factors could be used to investigate the research questions.*** Table 6.31 shows the summary of items dropped as a result from factor analysis. It is important to note that the construct

validity and convergent validity is reported in the measurement model assessment as suggested by Hair et al. (2013). The results observed in the presented procedure so far are important for further statistical analysis, which will utilise more robust and sophisticated statistical procedures using the PLS technique.

Table 6.31: Summary of Items Dropped from Factor Analysis

Variable	*Original Number of Items*	*Number of Items Dropped*	*Remaining Items*
PERSONAL	30	3	27
SOCIAL	12	3	9
TENSION	34	13	21
INNO	25	2	23
ADOPT	8	-	8
Total Remaining Items for Second Order Construct			88

6.3.11 Measurement Model Assessment (Outer Model Estimation)

As was explained in Chapter Five, the PLS analysis can be separated into two parts: (i) the measurement model that concerns the validation of constructs and (ii) the structural model that focuses on the substantive relationships of the validated constructs. It is important in this section to note that the term validation refers to demonstrating the measure of unidimensionality (having one underlying construct), reliability (comparatively free of measurement error) and validity (measuring what it should) (Hair et al., 2013).

Based on the methodological rationale explained in Chapter Five, Section 5.5.2 and 5.5.3 this research adopts the two-step approach, which begins with the validity assessment of the measurement model. When the validity of the measurement model has been established, the second step follows, which is the estimation of the overall

structural model. This approach is considered appropriate when the model possesses a strong theoretical rationale and the measures used in the study are highly reliable (Hair et al., 2010).

The measurement model specifies how the latent variables or the hypothetical constructs are measured in terms of the observed variables. The main purpose of a measurement model in PLS is to describe how well the observed variables serve as a measurement instrument for the latent variables. In the initial analysis, the items were purified and reduced through factor analysis. ***The remaining items are now subjected to measurement model assessment, also known as outer model estimation, to allow for the test of structural model and hypothesis testing later on. In this stage, the validity of the factor analysed items were inspected.***

6.3.11.1 Unidimensionality and Reliability

Before analysis could proceed further, it was necessary to again purify the multiple item measurement scales. In Section 6.3.9, individual item analysis was computed by item-total correlations, inter-item correlations and factor structure. However, this analysis could not ensure the unidimensionality of measures, which is viewed as an important requirement of valid measurement. It is strongly recommended that a more rigorous statistical procedure should be employed to refine and confirm the factor structure generated from the earlier factor analysis (Gerbing & Anderson, 1988).

Accordingly, using PLS, individual item reliability was assessed by inspecting the loadings (λ), or simple correlations of the indicators with their respective latent variable. With reference to this, Table 6.32 displays the factor loadings and cross loadings of all

components. A loading is significant when it is >0.55 (Falk & Miller, 1992; Hair et al., 2010), whereby items that received a loading lower than 0.55 were discarded. The discarded items are from PERSONAL (TRN1-6, ENJ3, ENT2) that make up TRN and INT as well as INNO (TRL1-5, COX1-5, RA1, RA2, COM3, OBS3) that make up TRL and COX. From the table inspection, the remaining items show that the loadings exceed 0.5839 and load more highly on their own construct than on others, hence ensuring that cross loading is not permissible.

Also, with this factor loadings result, the unidimensionality of all the items were assessed. The items should be significantly associated with an underlying construct. Each item must be associated with only one latent variable. It was found that from the factor loadings presented in Table 6.32, the remaining variables meet the unidimensionality requirements where the loading is >0.5 (Falk & Miller, 1992; Hair et al., 2010). ***These results verified that the items used in this research are associated with their underlying constructs. Therefore, the existence of unidimensionality is established in this study.***

Despite examining the reliability through factor loadings, reliability assessment can also be done through the result of internal consistency. Internal consistency is assessed using two measures that is Cronbach's alpha and composite reliability. Nunnally and Bernstein (1994) suggest > 0.70 as the applicable benchmark for satisfactory reliability in the early stages of research and 0.80 as a more strict reliability, which is applicable in basic research. Table 6.33 shows the results of Cronbach's alpha and composite reliability of each set of measures for each component.

Table 6.32: Assessment of Construct Factor Loadings and Cross Loadings (Outer Model)

Items	*PERSONAL*	*SOCIAL*	*TENSION*	*INNO*	*ADOPT*
ENT1	**0.5793**	0.3371	0.3662	0.3496	0.3736
ENJ1	**0.8214**	0.2075	0.3428	0.3182	0.3437
ENJ2	**0.8318**	0.2476	0.3585	0.2737	0.2362
ENJ4	**0.8333**	0.2723	0.3311	0.2544	0.2309
ENT3	**0.7942**	0.2205	0.3320	0.2655	0.2221
ENJ5	**0.6564**	0.3178	0.3167	0.3407	0.4084
ENJ6	**0.8310**	0.1756	0.2698	0.2324	0.2386
ENT4	**0.8553**	0.2444	0.3531	0.3133	0.2887
ENT5	**0.8500**	0.1559	0.2532	0.2465	0.2774
ENT6	**0.8464**	0.1531	0.2463	0.2344	0.2789
ENT8	**0.8299**	0.1891	0.3112	0.2683	0.3312
ENJ7	**0.8557**	0.2103	0.2749	0.2700	0.3316
ENT7	**0.6636**	0.3008	0.4278	0.4275	0.4071
ENJ8	**0.8374**	0.1016	0.2174	0.2319	0.2618
ENJ9	**0.8075**	0.1638	0.2504	0.2550	0.3139
SIN4	0.2362	**0.6702**	0.4853	0.3512	0.3801
SIF7	0.1861	**0.7288**	0.4703	0.3473	0.2997
SIN7	0.2162	**0.7191**	0.6121	0.4520	0.3573
SIN1	0.2709	**0.6933**	0.4406	0.3317	0.3502
SIF4	0.1948	**0.6504**	0.3807	0.3331	0.3298
SIF5	0.1851	**0.6976**	0.4031	0.3066	0.2691
SIN2	0.2308	**0.6851**	0.5354	0.4126	0.4267
SIN3	0.2661	**0.7603**	0.5891	0.4259	0.3438
SIF1	0.2482	**0.7616**	0.5270	0.4108	0.2893
BLG1	0.3176	0.5852	**0.7740**	0.5400	0.4526
CSHIP1	0.3698	0.5978	**0.7806**	0.5526	0.4200
CHSIP3	0.2597	0.5147	**0.6494**	0.4283	0.3248
BLG6	0.2523	0.3417	**0.6249**	0.4969	0.3364
ESC1	0.3085	0.5227	**0.7874**	0.6353	0.5275
ESC2	0.3498	0.4010	**0.5934**	0.4561	0.3767
PLY5	0.2581	0.4229	**0.6320**	0.4277	0.3835
PLY1	0.3125	0.5360	**0.6370**	0.4497	0.3842
BLG9	0.2853	0.4628	**0.7554**	0.5743	0.4200
PLY8	0.2917	0.4288	**0.6468**	0.5105	0.3444
BLG3	0.2402	0.4538	**0.6999**	0.5122	0.3957
BLG5	0.3227	0.5336	**0.7419**	0.5388	0.4803
BLG6	0.3879	0.5701	**0.7724**	0.4979	0.4704
BLG8	0.3700	0.6261	**0.7947**	0.5690	0.4186

Items	*PERSONAL*	*SOCIAL*	*TENSION*	*INNO*	*ADOPT*
RA4	0.2961	0.3727	0.5408	0.7868	0.5613
RA5	0.3512	0.3523	0.5715	0.8191	0.6296
OBS1	0.1864	0.3664	0.3686	0.5839	0.4305
OBS2	0.2675	0.3469	0.4769	0.6616	0.4772
OBS4	0.2609	0.4001	0.5066	0.7110	0.4073
OBS5	0.3543	0.4054	0.6229	0.7685	0.5284
COM2	0.3435	0.415	0.5886	0.7634	0.5529
COM1	0.2592	0.4464	0.5545	0.7290	0.5002
COM4	0.2028	0.3700	0.4295	0.6022	0.3768
COM5	0.2227	0.2949	0.4125	0.5935	0.4158
RA3	0.3754	0.4333	0.5742	0.7681	0.5962
ADOPT1	0.2413	0.3259	0.3692	0.4973	0.7135
ADOPT2	0.3398	0.3744	0.4722	0.5923	0.7977
ADOPT3	0.3522	0.4152	0.4381	0.5549	0.8183
ADOPT4	0.4084	0.4272	0.4684	0.5946	0.8584
ADOPT5	0.3747	0.3943	0.5202	0.6025	0.8256
ADOPT6	0.3165	0.4143	0.5509	0.6467	0.8509
ADOPT7	0.3524	0.3361	0.4016	0.4756	0.7493
ADOPT8	0.3059	0.3745	0.4550	0.5046	0.7237

Additionally, as can be seen in Table 6.32, all components that are greater than 0.5839 (OBS1) were deemed reliable from the results presented in Table 6.32. Based on the results, problematic or poorly fitting items were identified and a decision was made whether to retain or delete them; this comprised several purified construct measures derived from the factor analysis. ***This suggests that all of the items are good indicators of their respective components and can proceed for the validity test.***

Table 6.33: Assessment of Construct Reliability

Constructs	*Cronbach's Alpha*	*Composite Reliability*
PERSONAL	0.958	0.962
SOCIAL	0.876	0.900
TENSION	0.923	0.934
INNO	0.901	0.918
ADOPT	0.915	0.931

6.3.11.2 Convergent and Discriminant Validity

Two types of measure of validity were used – discriminant validity and convergent validity. Convergent validity refers to the principle that the indicators for a given construct should be at least moderately correlated among themselves while discriminant validity implies the extent to which a given construct differs from other constructs.

In examining convergent validity using the PLS technique, the common measures used were the composite reliability (CR) and average variance extracted (AVE). The CR results show that all constructs were above the acceptable value of ≥0.70 (Hair et al., 2010). This result signifies that convergent validity was established because all items loaded strongly on their associated factors and each of the factors.

In addition, AVE includes the variance indicators captured by the construct relative to the total amount of variance including the variance due to error. An AVE that is > 0.5 is considered sufficient (Fornell & Larcker, 1981; Tenenhaus, Vinzi, Chatelin & Lauro, 2005). The results indicate that all constructs exceed the minimum requirement of validity.

Table 6.34 confirms convergent validity as the CR and AVE in manifest variables extracted by latent variables were at least 0.900 for CR and 0.502 for AVE. This indicates that more variance was explained than unexplained in the variable associated with a given latent variable (Falk & Miller, 1992).

Table 6.34: Results for Convergent Validity and Discriminant Validity

Constructs	*CR*	*AVE*	*PERSONAL*	*SOCIAL*	*TENSION*	*INNO*	*ADOPT*
PERSONAL	0.962	0.605	**0.778**				
SOCIAL	0.900	0.502	0.322	**0.708**			
TENSION	0.934	0.504	0.436	0.707	**0.710**		
INNO	0.918	0.508	0.407	0.536	0.729	**0.713**	
ADOPT	0.931	0.630	0.425	0.484	0.582	0.708	**0.794**

Note: Bold diagonal elements are the square roots of AVE. Off diagonal elements are the correlations between constructs

Discriminant validity was assessed in two-ways. Based on Table 6.34, AVE was examined first. If AVE >0.50 (Falk & Miller, 1992; Tenenhaus et al., 2005), it indicates appropriate. Secondly, the square root of AVE was compared with the correlations among construct, which can be seen in the off-diagonal elements. The square root of AVE for all of the constructs should exceed the correlation between constructs in order to demonstrate discriminant validity, the diagonal elements should be greater than off-diagonal elements (Fornell & Larcker, 1981). The results shows that each construct differs sufficiently from the other constructs, as their square root of AVE values are bigger than the correlation coefficients; hence, it demonstrates discriminant validity.

These statistics suggest that each construct relates more strongly to its own measures than to the measures of other constructs. This indicates that all constructs share more variance with their own measures than with the others. These two sets of findings provide strong evidence of discriminant validity among the constructs.

Therefore, it can be concluded that all constructs were more strongly correlated with their own measures than with any of the other constructs, suggesting good convergent and discriminant validity. Therefore, the next analysis on path modelling can be done.

6.3.12 Structural Equation Assessment (Inner Model Estimation)

The development of the measurement model in Section 6.3.11 has reduced data and obtained a manageable number of valid, reliable and composite variables, which can be used in the final step for evaluating structural models. From the measure of reliability and validity for which item reliability, convergent validity and discriminant validity were noted, these constructs allow the estimation of the structural model, hypotheses testing and mediation effect testing to proceed.

The procedures for performing the assessment of the structural model, hypotheses testing and mediation effect testing were discussed in Chapter Five, Section 5.5.3 onwards. The structural model specifies the theoretical relationships between or among the constructs as well as identifying whether the constructs directly or indirectly influence or change the values of other constructs in the model. ***Thus, this section aims to test the hypothetical conceptual model that prescribes the relationships between social media adoption and the four latent variables as well as the observed variables. The properties of the hypothesized model are as follows: Personal Needs, Social Needs, Tension Release Needs, Innovation Characteristics and Social Media Adoption. To assess this, the inner model estimation started off with the bootstrapping simulation, as discussed in the section below.***

6.3.12.1 Bootstrap Simulation

Table 6.35 reports the standardised parameters, which are obtained from bootstrap simulation. The *t*-values that have a value of >1.96 and indicate significant at 5 per cent are used to confirm the relationships between constructs (Tenenhaus et al., 2005). The

mean, standard deviation, *t*-value and path coefficients results for the structural model are explained in Table 6.35. ***From the table, it shows that there is no significant relationship between SOCIAL → INNO and TENSION → ADOPT.***

6.3.12.2 Algorithms: PLS Path Modelling

A major emphasis in PLS analysis is on variance explained as well as establishing the significance of all path estimates. Therefore, in order to determine this, the predictive power of the structural model is assessed using the R^2 values of the endogenous constructs. PLS R^2 represents the amount of variance in the construct that is explained by the model.

Table 6.35: Standardised Parameters by the Bootstrap Simulation

Hypothesised Relationship	*Mean*	*SD*	*Standard Error*	*t-value*	*Path Coefficients*
PERSONAL → INNO	0.112	0.038	0.038	2.883*	0.109
SOCIAL → INNO	0.041	0.060	0.060	0.632	0.038
TENSION → INNO	0.654	0.067	0.067	9.726*	0.654
INNO → ADOPT	0.575	0.058	0.058	9.809*	0.571
PERSONAL → ADOPT	0.148	0.037	0.037	3.961*	0.147
SOCIAL→ ADOPT	0.118	0.042	0.042	2.804*	0.117
TENSION → ADOPT	0.016	0.061	0.061	0.320	0.020

** Significant if > 1.96 for two-tailed test*

The path coefficients and R^2 values that derived from the model provide the statistical basis for hypotheses testing to determine whether the hypothesized relationships are statistically significant. The path coefficient reflects the strength of the relationships between the manifest variables and the latent variables. The R^2 value explains the predictive power of a model for the endogenous variables. From Table 6.36, it is noted

that the predictive power of the variance (R^2) in key endogenous variables was at 0.541 for INNO and 0.534 for ADOPT.

Table 6.36: Predictive Power of Variance (R^2), Communality and Redundancy

Constructs	*R Square*	*Communality*	*Redundancy*
PERSONAL	0	0.605	0
SOCIAL	0	0.502	0
TENSION	0	0.504	0
INNO	0.541	0.508	0.0387
ADOPT	0.534	0.630	0.0653
Average	0.538	0.550	
GoF		**0.544**	

According to Tenenhaus et al. (2005), the R^2 values of latent values in the structural model indicate predictive power. If it is at 0.25 it indicates weak predictive power, if it is at 0.50 it indicates moderate predictive power and if it is at 0.75 it indicates substantial predictive power. ***Therefore, from Table 6.36, it can be summarised that the path coefficient of this research structural model has moderate predictive power of R^2 over the latent variables.***

6.3.12.3 The Quality Indexes

From Table 6.36, communality and redundancy are also presented. Communality and redundancy can be used essentially in the same way as the R^2 since communality and redundancy reflect the relative amount of explained variance for latent and manifest variables. An important part of the structural model evaluation is the examination of fit indexes reflecting the predictive power of estimated inner and outer model relationships (Tenenhaus et al., 2005).

Therefore, goodness of fit (GoF) is used as an operational solution to this problem as it acts as an index for validating the PLS model globally. The general criterion for evaluating the GoF was explained in Chapter Five, section 5.5.3.3. The calculation is as follows:

$$GoF= \sqrt{[(0.538)\times(0.550)]}$$

GoF= 0.544

Evaluating GoF is done by calculating the geometric mean of the average communality and the average R^2. ***From this calculation, it shows that the result of GoF = 0.544, which exceeds the cut-off value of 0.25 for a medium size (Wetzels, Odekerken-Schroeder & van Oppen, 2009), is considered as satisfactory (Tenenhaus et al., 2005).***

6.3.13 Testing of Hypotheses Results

The hypothesized relationships were based on the theoretical framework developed in Chapter Four, section 4.4. Table 6.37 outlines the hypothesized relationships posited in this study. The significance of the hypothesised relationship is evaluated by examining the magnitude and significance of the path coefficients and its respective *t*-value. The following section will explain this further.

Table 6.37: List of Relationships and Hypotheses

Relationship	*Hypothesis*	
PERSONAL →INNO	H_{1a}	Personal needs positively influence the innovation characteristics of social media
SOCIAL → INNO	H_{1b}	Social needs positively influence the innovation characteristics of social media
TENSION → INNO	H_{1c}	Tension release needs positively influence the innovation characteristics of social media
INNO → ADOPT	H_2	Innovation characteristics of social media influences the adoption behaviour of consumer
PERSONAL → ADOPT	H_{3a}	Personal needs are positively related to social media adoption
SOCIAL → ADOPT	H_{3b}	Social needs are positively related to social media adoption
TENSION → ADOPT	H_{3c}	Tension release needs are positively related to social media adoption

6.3.13.1 Hypothesis Testing On The Whole Set of Path Coefficients

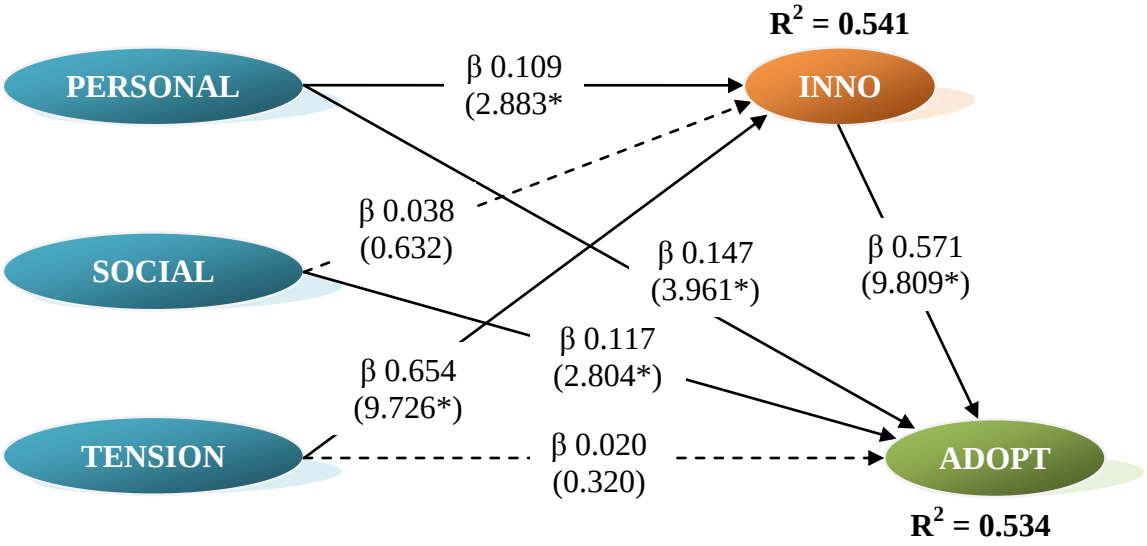
Table 6.28 shows the standardised parameters for the model from the results of the bootstrap simulation (Chin & Newsted, 1999). The *t*-values confirm the relationships between the constructs if the result of the *t*-value is >1.96, which indicates statistically significant at 5%. ***Therefore, from the results it shows that H_{1a}, H_{1c}, H_2, H_{3a}, H_{3b} are statistically significant with the path coefficients at 0.109, 0.654, 0.571, 0.147 and 0.117.***

Table 6.38: Results of Hypotheses Testing Using Structural Model

Hypothesis		*t-values*	*Path Coefficients*	*Empirical Conclusions*
PERSONAL →INNO	H_{1a}	2.883*	0.109	Supported
SOCIAL → INNO	H_{1b}	0.632	0.038	Not Supported
TENSION → INNO	H_{1c}	9.726*	0.654	Supported
INNO → ADOPT	H_2	9.809*	0.571	Supported
PERSONAL → ADOPT	H_{3a}	3.961*	0.147	Supported
SOCIAL → ADOPT	H_{3b}	2.804*	0.117	Supported
TENSION → ADOPT	H_{3c}	0.320	0.020	Not Supported

** Significant if > 1.96 for two-tailed test*

Also, as explained earlier in Table 6.36, it shows that the explained variance (R^2) for this research model is at 0.541 for TECH and 0.534 for ADOPT, and the GoF for this research model is at 0.544. ***From these results, it can be concluded that this research model is satisfactory (Tenenhaus et al., 2005).***



** Significant if > 1.96 for two-tailed test*

Key: PERSONAL – *Personal Needs*; SOCIAL – *Social Needs*; TENSION – *Tension Release Needs*; INNO – *Innovation Characteristics*; ADOPT – *Social Media Adoption (Behavioural Response)*

Figure 6.15: Statistical Significance of Path Coefficients

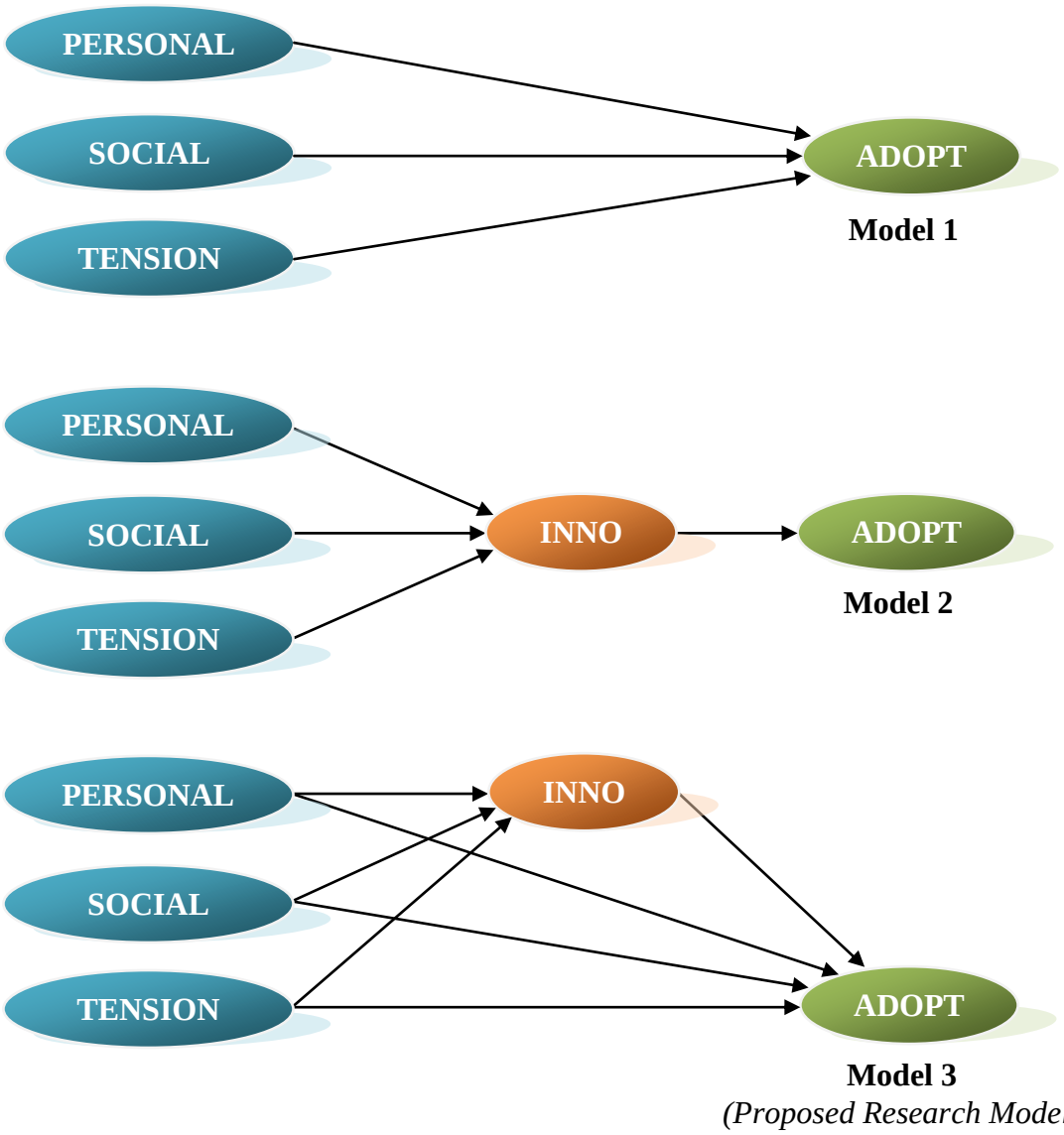
Table 6.38 shows that the results supported hypotheses H_{1a}, H_{1c}, H_2, H_{3a}, H_{3b} as evidenced by the path coefficient and significant t-values, while hypotheses H_{1b} and H_{3c} were not supported because of the insignificant t-values. Figure 6.15 depicts the final model as well as the results of the path coefficients, t-tests and R^2.

6.3.14 Mediation Effects on PLS Path Models

This research model suggests INNO as a mediator variable of the four variable constructs – PERSONAL, SOCIAL, TENSION and ADOPT. In order to test the mediation effect, as discussed in Chapter Five, Section 5.5.4, it raises the issue of how innovation characteristics can be justified as a variable in the model if the latter does not assume the four constructs have direct effects on both perceived media needs (PERSONAL, SOCIAL, TENSION) and behavioural response (ADOPT).

The latent variable INNO is a concept adopted by Rogers (2003). It is covered by five manifest variables, thus it is treated as a type of second order construct (Rossiter, 2002). Thus, it is also possible to rule out the possibility of taking the direct effect on the endogenous variable, ADOPT, of the three latent exogenous variables – PERSONAL, SOCIAL and TENSION – into account.

To underpin the theoretical assumption of perfect mediation with the empirical results, INNO was tested as the mediator, which has five manifest variables with an alternative model. This research model is treated as the baseline for conducting the comparison in mediation for the direct and indirect path effect. The testing of the mediation procedure follows Baron and Kenny (1986), as illustrated in Figure 6.16.



Key: PERSONAL – *Personal Needs*; SOCIAL – *Social Needs*; TENSION – *Tension Release Needs*; INNO – *Innovation Characteristics*; ADOPT – *Social Media Adoption (Behavioural Response)*

Figure 6.16: Alternative Models for Testing Mediating Effect as Proposed by Baron & Kenny (1986)

The mediation effect was tested by comparing the alternative models to this research model (the baseline model), that is, Model 3, which has an indirect and direct path from the exogenous to the endogenous variables, as shown in Figure 6.16. In Model 1, INNO which is the mediator, was excluded and PERSONAL, SOCIAL and TENSION were directly linked to ADOPT. Model 2 includes the indirect path from PERSONAL,

SOCIAL and TENSION to ADOPT via INNO. The results of these comparisons are explained in Table 6.39.

Table 6.39: Parameter Estimation of the PLS Models by the Bootstrap Method

Hypothesised Relationship	*Model 1*		*Model 2*		*Model 3*	
	β	t-value	β	t-value	β	t-Value
PERSONAL →INNO	-	-	0.109	2.815*	0.109	2.883*
SOCIAL → INNO	-	-	0.038	0.693	0.038	0.632
TENSION → INNO	-	-	0.655	10.381*	0.654	9.726*
INNO → ADOPT	0.211	4.952*	-	-	0.147	3.961*
PERSONAL → ADOPT	0.144	2.611*	-	-	0.117	2.804*
SOCIAL → ADOPT	0.392	5.964*	-	-	0.020	0.320
TENSION → ADOPT	-	-	0.708	22.495*	0.571	9.809*

** Significant if > 1.96 for two-tailed test*

In a comparison of Models 1 and 3 from Table 6.39, Model 1 assumes that the relationships of PERSONAL, SOCIAL, TENSION to ADOPT are significant because the *t*-values of 4.952, 2.611, 5.964 were deemed > 1.96, the cut-off point for the path to be statistically significant.

However, when Model 2 was compared with the baseline model, that is, Model 3, Model 2 shows that the indirect path from PERSONAL, and TENSION to ADOPT via INNO, are statistically significant as the *t*-values of 2.815, 10.381 and 22.495 are > 1.96; however, the indirect path of SOCIAL to ADOPT via INNO did not show a significant path with the *t*-value at 0.693 < 1.96.

In addition to showing the significant path coefficients and *t*-values for these three models, Table 6.40 further explains the GoF between these models. The GoF between these models helps to identify an index for validating these three proposed PLS models

globally. Model 1 illustrates a decrease in R^2 to 0.390 for ADOPT and GoF to 0.467 when the mediator INNO was excluded from the baseline model, which is Model 3.

Table 6.40: Goodness-of-fit Index for Three Comparison Models

Constructs	*Model 1*			*Model 2*			*Model 3*		
	R^2	C	r	R^2	C	R	R^2	C	r
PERSONAL	-	0.606	-	-	0.605	-	-	0.605	-
SOCIAL	-	0.501	-	-	0.502	-	-	0.502	-
TENSION	-	0.504	-	-	0.504	-	-	0.504	-
INNO	-	-	-	0.543	0.508	0.039	0.541	0.508	0.039
ADOPT	0.390	0.630	0.085	0.501	0.630	0.314	0.534	0.630	0.065
Average	0.390	0.560	0.085	0.522	0.550	0.177	0.538	0.550	0.052
GoF		**0.467**			**0.536**			**0.544**	

Whereas Model 2 illustrates a higher R^2 for INNO and ADOPT, at 0.543 and 0.501, respectively, while GoF increased to 0.536. Finally, Model 3, which is the baseline model, has an even greater R^2 for INNO and ADOPT and a higher GoF when compared to the other models. ***Therefore, it can be concluded that based on these three models, model 3 has the highest PLS global quality with a GoF of 0.544, which, referring back to the original research model, makes it the best fit model with partial mediation effect.***

6.3.14.1 Blindfolding for Model Quality

Table 6.41 shows a similar average of CV-Communality (H^2) for all models: 1, 2 and 3. The CV-Communality index (H^2) explains the quality of the measurement model while the CV-Redundancy index (F^2) explains the quality of the structural model. Table 6.41 indicates that model 1 has the greatest H^2 at 0.466, which demonstrates that between these three models, Model 1 has a better measurement model quality, while Model 3 has

a greater F^2 at 0.300, which signifies that the structural model quality for Model 3, when compared with the other two models, is the highest.

This shows that model 3, which does not have mediation, sustains a greater H^2 that explains that the capability of the path model to predict the manifest variables directly from their own latent variable by cross-validation is greater. However, the baseline model, which has a strong mediation effect, as explained in section 6.3.14, is deemed to have a greater F^2, which explains that the path model predicts the endogenous manifest variables indirectly from the prediction of their own latent variables using the related structural relation by cross-validation (Tenenhaus et al., 2005). ***Therefore, between these two indexes of model quality, F^2 is greater because it explains the entire structural model quality, which justifies the effect of mediation in the entire model. The result on the mediation effect shows that, overall, INNO fully mediated the relationship between PERSONAL, SOCIAL, TENSION and ADOPT.***

Table 6.41: Blindfolding Result for Three Comparison Model

Constructs	*Model 1*		*Model 2*		*Model 3*	
	H^2	F^2	H^2	F^2	H^2	F^2
PERSONAL	0.540	-	0.538	-	0.540	-
SOCIAL	0.364	-	0.367	-	0.366	-
TENSION	0.429	-	0.429	-	0.429	-
INNO	-	-	0.416	0.268	0.416	0.267
ADOPT	0.529	0.241	0.529	0.310	0.529	0.332
Average	**0.466**	0.241	0.456	0.289	0.456	**0.300**

H^2 – CV-Communality
F^2 – CV-Redundancy

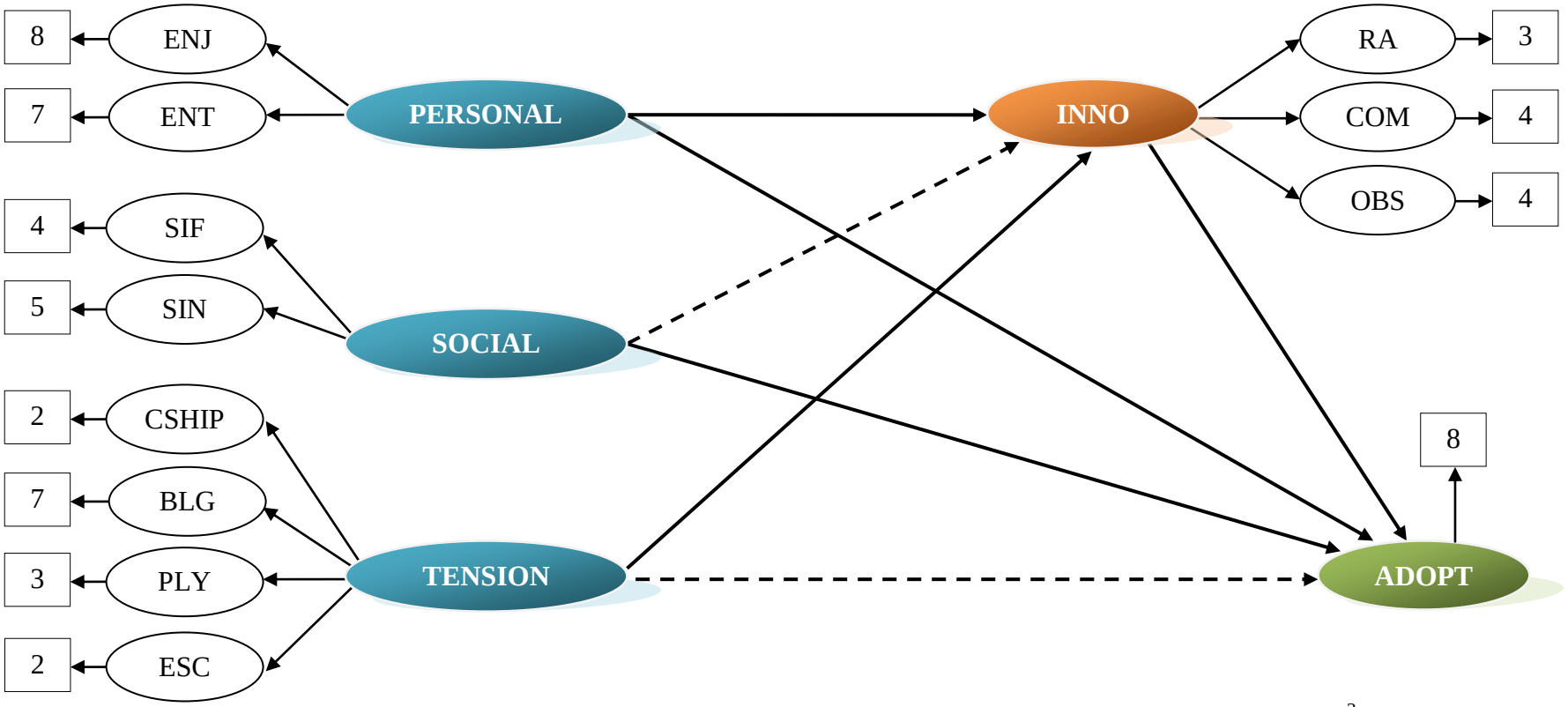
6.3.15 Quantitative Conclusion

As a conclusion from the qualitative data analysis, the proposed structural model confirms that only two insignificant relationships were found from the entire structural modelling, which means that two hypotheses were not supported by the statistical results. This is not something unexpected because the proposed relationship SOCIAL to INNO (t-value = 0.632, β = 0.038) was not so important according to the result of the qualitative analysis, inasmuch as most of the participants of FGD argued that without INNO they still use social media because social media, as the social place for interaction, is much more important than the technology embedded in it.

However, for TENSION to INNO, which also has no significant relationship (t-value = 0.320, β = 0.020) with ADOPT, is also due to the fact that it is only with INNO that the social media user can feel satisfied by having friends close to them, get connected, feel attached, be playful and escape from their mundane and stressful life. INNO lets the social media user feel more at ease of use because they can easily get personal with their social media at anytime and any place, especially when social media synchronization can be made between many technological devices.

The remaining five hypotheses posited a significant relationship. H_{1a} and H_{1c} state that PERSONAL and TENSION is positively influenced INNO. The support is demonstrated by the results that show a path coefficient of β = 0.109 and β = 0.654, which is statistically significant at t-value = 2.883 and 9.726 (>1.96). On the other hand H_{3a} and H_{3b} posit a significant relationship with the exogenous variable ADOPT that hypothesized PERSONAL and SOCIAL are positively related to ADOPT, which demonstrated path coefficient at β = 0.147 and β = 0.117 and

statistically significant at t-value = 3.961 and 2.804 (>1.96). Consecutively, the INNO to ADOPT relationship is hypothesized in H_2 as INNO having influence on ADOPT, which is demonstrated in path coefficient $\beta = 0.571$ and statistically significant at t-value = 9.809 (>1.96). The final structural model is depicted in Figure 6.17.



Key: PERSONAL – *Personal Needs*; SOCIAL – *Social Needs*; TENSION – *Tension Release Needs*; INNO – *Innovation Characteristics*; ADOPT – *Social Media Adoption*; ENT – *Entertainment*; ENJ – *Enjoyment*; SIF – *Social Influence*; SIN – *Social Interaction*; CSHIP – *Companionship*; BLG – *Belongingness*; PLY – *Playfulness*; ESC – *Escapism*; RA – *Relative Advantage*; COM – *Compatibility*; OBS – *Observability*

Figure 6.17: Final Structural Model

6.4 Chapter Summary

This chapter began with the results from the qualitative analysis, in which the findings from the FGD were used to develop consumer and social media measurements as well as to confirm the relationship proposed in the theoretical framework.

Then, this chapter presented the results of the quantitative analysis according to the descriptive statistics, multivariate assumptions test, reliability and validity test, factor analysis, measurement and structural model assessment and hypotheses testing, as well as the testing of the mediation effect.

The initial descriptive statistics explained the sample's demographic profile, as well as the geographical and ethnic characteristics. It also provided the background of the sample profile and their consumption pattern and behaviour with regards to social media. Then, the construct measurements were presented through which the results indicate that the measurement scale for each construct satisfies at least the minimum acceptance level of normality, skewness and kurtosis. The overall results derived from other variables reveal that the majority of the mean values are higher than 3, which is the mid-point of the scales employed. Accordingly, most of the standard deviations yield a value of less than 1, which implies that the data are distributed closely around the mean and are consistent. All items were also found to factorise accordingly.

Subsequently, the latent constructs and the observed measures were validated. The measurement models satisfied the criteria of unidimensionality, reliability, convergent validity and discriminant validity. Finally, the hypothesised relationships between the latent variables were tested using structural modelling. The mediation effect test was

also done in accordance with the analysis of Baron and Kenny (1986) and it was proved to be fully mediated.

Overall, analysis of the structural relationships supports five out of the seven hypotheses. The next chapter will address and discuss the research questions, as formulated in Chapter One, drawing upon the research findings and will be followed by the conclusions of the overall data analysis, including the implications and suggestions for future research.

Chapter Seven
DISCUSSION AND CONCLUSION

7.1 Introduction

Considering that direct study on social media is lacking, this research aimed to fill the knowledge gap by examining the factors that explain consumer adoption of social media. This present research converted the social media phenomenon into understanding the adoption of this medium in light of the consumer media needs and innovation characteristics of social media. Thereby, in return, the understanding helps to design a targeting strategy, and, hence, enhance the relationship with existing and potential customers via the social media platform.

This chapter discusses the findings from Chapter Six with a focus on answering the research questions presented earlier in Chapter One. This chapter summarizes the research findings by analysing how the results of the hypothesis testing have contributed towards addressing the research questions. The discussion follows, including the implications of the research findings for theory and practice, which includes practical suggestions with regard to social media marketing strategies and approaches.

In addition, it concludes the research effort by presenting an examination of the research contributions. As, to date, very limited research pertaining to social media behaviour has been undertaken and reported comprehensively, it is believed that the findings of this research could contribute some insights to the existing marketing literature and methodology, as well as enlighten practitioners. This is followed by addressing the

limitations of the study and suggestions for future research directions, and, finally, the overall conclusion of this research is drawn.

7.2 Demographic Characteristics of Respondents

Based on the data analysis conducted in Chapter Six, it was found that respondents in the 25 – 34 year age group accounted for the majority of the research sample (55.1%), followed by respondents in the 35 – 44 year group (29%). More than half of the respondents were females (59.3%), while males represented 40.7% of the respondents. Most of them were single, accounting for 47%.

With respect to educational background, about 36.7% of the respondents had a bachelor degree, with an additional 24.3% of them holding master degrees. An income of RM2,001 to RM4,000 was earned by the majority of respondents (45.3%). The majority of the respondents were from the Executive/Administrative level (25.2%), followed by students (majorly university/college student), accounting for 22.7%.

Most of the respondents in this study were from West Coast Malaysia, with the majority from Selangor (23.4%), followed by the Federal Territory of Kuala Lumpur (19.9%) and Penang (9.8%). They comprise Malays (64.3%), Chinese (20.1%) and Indians (11.9%). The majority of the respondents have been using social media for about 4 – 6 years (35.5%) and log in several times a day (57.5%). Their average time of use is less than 1 hour a day (35.3%), which they consider their average usage of social media,

with somewhat heavily used 46%, and being very active in their social media activities 49.3%.

7.3 Recapitulation of Data Analysis Results

The final structural model results provided evidence that the relationship between media needs and social media adoption was statistically supported. The mediation effect of innovation characteristics was also supported. The goodness-of-fit (GoF) value was satisfactory at 0.544. Accordingly, the value of H^2 at 0.456 provides evidence of a good measurement model and the F^2 value of 0.300 indicates a good structural model.

The question of what are the drivers that contribute to consumer adoption of social media (RQ1) was answered using the focus group discussions and survey results. The social media needs that were identified, comprise personal needs that consist of entertainment and enjoyment; social needs that consist of social interaction and social influence; and tension release needs that consist of companionship, belongingness, playfulness and escapism. Eight media needs were confirmed as contributing to the social media adoption.

Furthermore, the question on what is the relationship between media needs and social media innovation characteristics (RQ2) was answered using the findings from the survey data analysis. The innovation characteristics identified from the survey analysis are relative advantage, compatibility and observability. These factors were found to have a direct positive impact on overall social media adoption.

Moreover, the question on does social media innovation characteristics enhance the relationship between media needs and social media adoption (RQ3) were answered using the findings from the survey analysis. The relationship was found to have a positive impact on overall social media adoption. This question was also investigated through the mediation effect, which was deemed to have a significant effect on the overall model. This has helped to prove that the research model was significant and have a positive influence on social media adoption.

7.4 Re-Addressing Research Questions, Objectives, Hypotheses and Findings

A structural equation model was utilised to test a series of hypotheses that attempted to identify the structural relationship between the constructs on the proposed social media adoption model. As presented in Table 7.1, five out of seven hypotheses proposed in this research were supported, and those hypotheses generated statistically significant *t*-values and path coefficient scores (see Chapter Six, Section 6.3.13.1).

Table 7.1: Summary of the Results of the Hypotheses

	Hypothesis Path	*Results*
H_{1a}	Personal Needs →Innovation Characteristics	Supported*
H_{1b}	Social Needs → Innovation Characteristics	Not Supported
H_{1c}	Tension Release Needs → Innovation Characteristics	Supported*
H_{2}	Innovation Characteristics → Social Media Adoption	Supported*
H_{3a}	Personal Needs → Social Media Adoption	Supported*
H_{3b}	Social Needs → Social Media Adoption	Supported*
H_{3c}	Tension Release Needs → Social Media Adoption	Not Supported

** Significant if > 1.96 for two-tailed test*

The subsequent sections offer the detailed findings addressed by the research questions and hypotheses, which are summarised in Table 7.2, Table 7.3 and Table 7.4. It revisits the questions, hypotheses and furnishes answers, which are linked to the findings of the research. The main research question posed is 'what explains consumer adoption of social media'.

7.4.1 Discussion on RQ1- Dimensions of Social Media Needs

RQ1 - What are the drivers and dimensions that contribute to consumer adoption of social media?

In responding to the above research question, the following hypothesis was proposed:

Personal needs (H_{3a}), social needs (H_{3b}) and tension release needs (H_{3c}) are positively related to social media adoption

RQ1 examines the drivers that drive social media adoption. The proposed drivers were:

i. Personal needs were proposed to be driven by four dimensions – trendiness, enjoyment, entertainment and interactivity
ii. Social needs were proposed to be driven by two dimensions – social influence and social interaction
iii. Tension release needs were proposed to be driven by four dimensions – belongingness, playfulness, companionship and escapism

The media needs were confirmed to have three valid higher order constructs that drive the social media adoption, comprising personal needs, social needs and tension release needs, in accordance with previous research (Katz et al., 1974; Blumler, 1979; Kaye,

2004; Severin & Tankard, 2010). In agreement with prior research on media needs that lead to the adoption or usage, consumers tend to use social media for these three affective responses, which measure eight dimensions: (i) entertainment, (ii) enjoyment, (iii) social influence, (iii) social interaction, (iv) companionship, (v) belongingness, (vi) playfulness, and (vii) escapism. The results were expected and in agreement with UGT and other media studies (Papacharissi & Rubin, 2000; Chang, Lee, & Kim, 2006; Diddi & La Rose, 2006; Quan-Haase & Young, 2010; Lee & Cho, 2011), which validates these affective responses as having an impact on social media adoption.

From the proposed hypotheses, only two (H_{3a} & H_3b) of the three relationships proposed were supported as having a direct relationship with social media adoption – personal needs and social needs. The results were expected and in agreement with the findings from previous research that studied Internet technology media (Kaye, 1998; Perse & Ferguson, 2000b; Leung, 2001; Quan-Haase & Young, 2010; Lee & Cho, 2011). Although tension release needs were found to have no direct relationship with social media adoption (H_{3c}), the relationship was mediated by the innovation characteristic (as proposed by H_{1c}), which will be further explained in RQ3. This insignificant relationship is rather unexpected, because, according to Leung (2001), and Quan-Haase & Young (2010), sociability plays a role in Internet-based device adoption. The unexpected result may be due to the nature of social media that allows anonymity, which mediates the tension release needs and the innovation characteristics of social media as an important element to assist the adoption process; as explained by Kim et al. (2010). In addition, the nature of the study that looks at the Malaysian sample might affect the findings of this research. This can be supported by cultural values, which was predicted by Rogers (2003) to have an effect on technology adoption.

For the two positive relationships, specifically for H_{3a}, the results indicate that consumers perceive social media as fulfilling the entertainment and enjoyment needs, which, in this context, social media offers and allows consumers to be active, entertained, flexible, stylish, attractive, excited and unique. Social media also lets consumers feel contented, satisfied, happy, attentive, at leisure, give meaning to life and rewarding. This outcome denotes that social media is a medium where consumers feel it is worth spending time to meet their personal gratification. In this respect, it provides additional support to the media uses and gratifications literature. These findings are in agreement with the findings from previous research in which Lee and Cho (2011) found entertainment to be one of the media needs that encourage users to use social media via mobile broadband, and Quan-Haase and Young (2010) found enjoyment (fun) to be the indicator to use Facebook Instant Messaging.

Moreover, despite social media fulfilling consumer personal needs, it also brings in excitement in terms of fulfilling social needs, as proposed in H_{3b}. Social needs are perceived to have a strong influence on the consumer, which mostly comes from the consumer's social circle and peer pressure (Olson & Maio, 2003; Bagozzi et al., 2007). The social circle and peer influence lead consumers to sign up with social media and have their own personal account; hence, they can be in contact and friends with others. By doing this, it lets consumers be part of the social media friendship circle, and lets them stay in contact with friends from near and far, and keep updated concerning their friends social life and activities. In addition, social interaction is also perceived as important in letting the consumer be expressive, free, fit in with a social group of people that share the same interests with them, get more points of views, meet new people and participate in the conversation. The findings are consistent with research by Perse and

Dunn (1998), Kaye (1998), Parker and Plank (2000), and Ko et al. (2005) who found social interaction and social influence to be indicators for Internet technology usage.

Having to explain these two significant relationship, the findings of H_{3a} and H_{3b} provide additional support for a number of previous researches, such as Bagozzi et al. (2007), Chung and Austria (2010), and Durukan et al. (2012) concerning the antecedents and consequences of online media interaction.

In contrast, H_{3c} which shows an insignificant relationship between needs and adoption, but requires mediation of innovation characteristics in order to establish a relationship as proposed by H_{1c}, explains that consumers perceive social media as a place they feel companionship, belongingness, playfulness and escapism. In explaining this confirmed dimension that drives adoption, companionship enables the consumer to expand and strengthen their social network, be less lonely, get in touch with friends that stay far away or from the other side of the world and meet others that share the same interests as themselves. This indicates that social media is a place for friendship. Belongingness enables the consumer to feel attached to friends, keep friends close, connect with the world, and get a sense of brotherhood/sisterhood with friends throughout the world and stay connected with society. Playfulness enables the consumer to arouse imagination, amuse them with social media special property and leads them to social media exploration that stimulates their curiosity and mood. Finally, escapism enables the consumer to escape from their daily routine, family and problems, lets them forget about commitments and lets their time pass where they use social media as a place to kill boredom by escaping from the real world. These four confirmed dimensions that indirectly drive social media adoption are in agreement with previous research done by Rook (1987), Wong and Csiksazentmihalyi (1991), Lee and Robbins (1995), Moon and

Kim (2001), Koh and Kim (2003), Sledgianowski and Kulviwat (2009), and Close and Kukar-Kinney (2009).

Therefore, it can be concluded that personal needs, social needs and tension release needs are an important construct that influences social media adoption (direct and indirect effect). Exploiting the potential and unique feature of social media arouses these needs; this categorisation should be the target category for marketers to increase the consumer social media experience via an effective social media marketing campaign. This categorisation of affective response could also help marketers identify which attributes of social media they can use to emphasise when using social media as a point of contact with the consumer.

A major finding of this research was the establishment of these set of needs that lead to social media adoption. This is evidence that these needs play a critical role in enhancing the inherently social media behaviour. These findings also complement other media studies showing that social media shares some similar needs with previous media studies (see Papacharissi & Rubin, 2000; Leung, 2001; Stafford, Stafford, & Schkade, 2004; Weng & Ding, 2012). Table 7.2 summarises the findings for RQ1.

Table 7.2: Readdressing RQ1 with Objectives, Hypotheses and Findings

Objective	*Hypothesis*	*Findings*
RQ1: What are the drivers and dimensions that contribute to consumer adoption of social media?		
1. To identify the drivers and dimensions of consumer media needs that drive social media adoption 2. To distinguish the motivation ***that drives the affective*** and cognitive component of attitude formation in social media adoption	H_{3a} – Personal needs are positively related to social media adoption	The findings identified that personal needs has a positive relationship with social media adoption. Hence, making personal needs the driver that contributes to consumer adoption of social media, which consists of two dimensions: (i) entertainment and (ii) enjoyment
	H_{3b} – Social needs are positively related to social media adoption	The findings identified that social need has a positive relationship with social media adoption. Hence making social needs the driver that contributes to consumer adoption of social media, which consists of two dimensions: (i) social influence and (ii) social interaction
	H_{3c} – Tension release needs are positively related to social media adoption	The findings identified that tension release needs DOES NOT have a direct relationship with social media adoption. Hence, making tension release needs as HAVING AN INDIRECT RELATIONSHIP with social media adoption that contributes to four dimensions that drive adoption: (i) companionship, (ii) belongingness, (iii) playfulness, and (iv) escapism
		It can be concluded that the affective responses that drives consumer attitude towards social media consists of eight dimensions: (i) entertainment, (ii) enjoyment, (iii) social influence, (iv) social interaction, (v) companionship, (vi) belongingness, (vii) playfulness, and (viii) escapism.

7.4.2 Discussion on RQ2- Media Needs and Technological Innovation of Social Media

RQ2 - What is the relationship between media needs and social media innovation characteristics?

In responding to the above research questions, the following hypothesis was proposed:

Personal needs (H_{1a}), social needs (H_{1b}) and tension release needs (H_{1c}) positively influence the innovation characteristics of social media

RQ2 examines the mediation effect of innovation characteristics that link the media needs and adoption behaviour. The proposed relationships were:

i. Personal needs → innovation characteristics → social media adoption
ii. Social needs → innovation characteristics → social media adoption
iii. Tension release needs → innovation characteristics → social media adoption

The innovation characteristics were confirmed to mediate two relationships – personal needs (H_{1a}) and tension release needs (H_{1c}) – with adoption. The significant relationship of H_{1a} and H_{1c} explains that innovation characteristics, which consist of relative advantage, compatibility and observability of social media, play an important role in helping to enhance the social media adoption rate. This finding is expected and is supported by Parasuraman (2000), Garcia & Calantone (2002), Lee et al. (2003), Venkatesh et al. (2003), Kaplan & Haenlein (2010), and Fischer & Reuber (2011).

However, H_{1b} was found to have an insignificant relationship that confirmed that innovation characteristics do not mediate the relationship between social needs and social media adoption. In particular, it implies the broader impact of social interaction and social influence concerning social media tools and platforms in facilitating the goal

of consumers to adopt social media. The results show that only two categories of needs are enhanced by innovation characteristics to increase the adoption – personal needs and need to release tension. Social needs are insignificant with innovation characteristics in this sense.

Having explained earlier all the needs categories, the question is posed, why are social needs not enhanced by technological innovation? Innovation can be regarded as one technology differing from another according to the configuration of bundles of attributes that the technology has (Plouffe, Vandenbosch, et al., 2001; Rogers, 2003). Social media technology innovation is associated with a different set of consumer salient beliefs. Supported by Eagly et al. (1994), Haddock and Zanna (1999), and Huskinson and Haddock, 2004, the insignificant H_{1b} explains the variability across social media users in the extent to which consumer attitudes correlate with the favourability of affective and cognitive responses towards decision making to adopt social media. Hence, the social factor, which prompted affective responses is not in favour of innovation characteristics, which implies that for adoption behaviour to take place socially, consumers do not need technology innovation (i.e. relative advantage, compatibility and observability) to enhance social media adoption and usage. Without these mediators, the relationship is still perfectly established.

This is also due to the fact that the social nature of social media very much depends on the social element (Bagozzi et al., 2007; Hanna, Rohm, & Crittenden, 2011; Durukan et al., 2012). Social media was built for socialising (see Chapter Two). Therefore, the idea of adopting social media is highly based on the socializing feature that social media has instead of its innovation characteristics. Consumers do not need to rely on technology innovation in order for them to form adoption behaviour. Social needs towards social

media come from the recommendations of friends to adopt social media and social influence, as supported by Bagozzi and Dholakia (2002), and Dholakia et al. (2004). The insignificant relationship proposes to marketers that they need to become more like a friend to the social media consumer rather than only to be present on social media sites and remain silent.

These results suggest that innovation characteristics are able to mediate the relationship between personal needs and tension release needs with social media adoption, whereas it is unable to mediate the relationship between social needs and social media adoption. Thus, it demonstrates that innovation characteristics are an important mediator in enhancing personal and tension release needs, whereby the social factor plays a critical role in enhancing the inherently social media behaviour. Another major finding of this research was the establishment of this relationship. Table 7.3 summarises the findings for RQ2.

Table 7.3: Readdressing RQ2 with Objectives, Hypotheses and Findings

Objective	*Hypothesis*	*Findings*
RQ2: What is the relationship between media needs and social media innovation characteristics?		
1. To identify the type of media needs and innovation characteristics that dominantly drives consumer adoption of social media	H_{1a} – Personal needs are positively influenced by the innovation characteristics of social media	Personal needs are influenced by the innovation characteristics of social media. Hence, personal needs that consist of (i) entertainment and (ii) enjoyment are positively influenced by innovation characteristics that consist of three dimensions: (i) relative advantage, (ii) compatibility, and (iii) observability
	H_{1b} – Social needs are positively influenced by the innovation characteristics of social media	Social needs are NOT influenced by the innovation characteristics of social media. Hence, social needs that consist of (i) social influence and (ii) social interaction are NOT positively influenced by innovation characteristics that consist of three dimensions: (i) relative advantage, (ii) compatibility and (iii) observability
	H_{1c} – Tension release needs are positively influenced by the innovation characteristics of social media	Tension release needs are influenced by the innovation characteristics of social media. Hence, tension release needs that consist of (i) companionship, (ii) belongingness, (iii) playfulness and (iv) escapism are positively influenced by innovation characteristics that consist of three dimensions: (i) relative advantage, (ii) compatibility and (iii) observability

7.4.3 Discussion on RQ3- Technological Innovation of Social Media and Adoption

RQ3 – Does social media technological innovation mediate the relationship between media needs and social media adoption?

In responding to the above research question, the following hypothesis was proposed:

Innovation characteristics of social media influences the adoption behaviour of the consumer

RQ2 examines whether the innovation characteristics of social media are related to the social media adoption. Five dimensions were proposed to have influenced social media adoption:

i. Relative Advantage
ii. Compatibility
iii. Trialability
iv. Observability
v. Complexity

The results of this research support the conclusions of Midgley and Dowling (1978), and Rogers (2003) that innovation characteristics is significantly and positively related to the adoption of new products. Accordingly, the role of social media innovation characteristics, which act as a cognitive response, influences social media adoption behaviour (H_2). The findings indicate that social media innovation characteristics have three confirmed dimensions that influence the adoption behaviour: (i) relative advantage, (ii) compatibility, and (iii) observability, which is in agreement with prior

research conducted by Garcia and Calantone (2002), Venkatesh et al. (2003), and Talukder and Quazi (2011). The fundamental of innovation, as proposed by Rogers (2003), uses these characteristics to develop a set of unique technology attributes that enhance the speed of technology adoption. The research findings have confirmed that among the five innovation characteristics proposed by Rogers, only three are significant in the context of social media.

This implies that consumers perceive social media as having the attribute of *relative advantage* in that they perceive social media as being better than any alternative technology medium. On the other hand, consumers also perceive social media as having the attributes of *compatibilit*y. Consumers perceive social media as compatible with other technology mediums that let them share their existing values without having to change any value that they uphold in order to use social media. It is also connected to the ease of use due to the fact that social media can be shared and can be used from other communication mediums be it through computer, smartphones, tablets, iPad or Wi-Fi cameras. This means that the higher the compatibility of the social media with other mediums, the less certainty and gap between social media innovation characteristics and consumer needs. In addition, consumers perceive social media as having the attribute of *observability* through which the result of innovation that consumers use is visible to others, which, in return, boosts consumers' social status as having the technology in their hand. Easier recognition of the benefits or social media functions corresponds to faster diffusion of the information. These results are supported by Kaplan & Haenlein (2010), Kim et al. (2010), Kietzmann et al. (2011), Lee & Cho (2011), and Durukan et al. (2012).

Overall, the positive relationship between innovation characteristics and social media adoption is in line with other studies that report that people perceive technology mediums with high innovation characteristics as having a higher degree of technology adoption (Damanpour, 1988; Rogers, 2003; Teo & Pok, 2003; Lin & Yu, 2006).

Contrary to prediction, trialability and complexity were not found to be the innovation characteristics of social media. This was predicted due to the fact that trialability is the least important characteristic in many technology innovation studies as well as complexity attributes (see Lee et al., 2003; Compeau et al., 2007; Ho & Wu, 2011). In addition, if complexity in innovation is significant, the innovation will work as the barrier for its diffusion, which, in accordance with this research, it was noted that social media has a lower degree of complexity, meaning that it is not an attribute to describe social media innovation (Moore & Benbasat, 1991; Venkatesh et al., 2003).

In conclusion, exploiting the potential and unique features of social media innovation characteristics influences the speed of social media adoption. Technology innovation characteristics that come as part of social media property does enhance the relationship between media needs and social media adoption and should be incorporated in social media marketing activities in order to increase consumer experience.

Another major finding of this research was the establishment of this relationship. This is evidence that cognitive responses towards social media adoption play a critical role in enhancing the inherently social media behaviour. Table 7.4 summarises the findings for RQ3.

Table 7.4: Readdressing RQ3 with Objectives, Hypotheses and Findings

Objective	*Hypothesis*	*Findings*
RQ3: Does social media innovation characteristics enhance the relationship between media needs and social media adoption?		
1. To distinguish the motivation ***that drives the*** affective and ***cognitive*** component of attitude formation in social media adoption 2. To suggest a suitable marketing strategy that determines the ways of segmenting, targeting and positioning consumers in social media based on affective, cognitive and conative response	H_2 – Innovation characteristics of social media influence the adoption behaviour of consumers	The findings identified that innovation characteristics, which consist of three dimensions: (i) relative advantage, (ii) compatibility and (iii) observability of social media, influence the adoption behaviour of consumers. Hence, meaning that innovation characteristics drive the cognitive responses of consumer behaviour.
		It can be concluded that when the mediator effect of innovation characteristics were investigated, the entire structural model shows a high R^2 (0.534) and GoF (0.544), which means that innovation characteristics play a significant role in bridging the antecedent of media needs and social media adoption
		Consumers' affective responses towards social media were driven by personal, social and tension release needs making enjoyment, entertainment, social influence, social interaction, companionship, belongingness, playfulness and escapism to become the uses and gratifications that they received from social media adoption. Which means that personal, social and tension release needs are three ways of targeting and segmenting the social media consumer market according to the psychological needs that they portray towards social media. Consumer cognitive responses towards social media were driven by social media

		innovation, which consists of (i) social media relative advantage, (ii) social media compatibility and (iii) social media observability. Hence, it is important to include these characteristics of innovation in social media marketing strategy. By having all of the above-mentioned responses, drives the conative responses towards adopting social media.

In conclusion, this section runs through the key findings of the data analysis covered in Chapter Six of this thesis. The presentation of the key findings of this research covers the findings from both stages of the research (i.e. qualitative and quantitative). The findings provide a picture of what makes consumers adopt social media, which explains the antecedents of social media adoption. The importance of these findings lies in the identification of the consumer media needs and innovation characteristics driver. The rationale behind this fact emanates from the point of generalising the results of the FGD in combination with those of the survey, which is able to explicitly highlight the contributions of this study.

7.5 Research Summary

Once again, it is stressed that the main objective of this research endeavour was to identify and determine the key determinants that influence the adoption of social media with a focus given on media needs and innovation characteristics. In order to accomplish this objective, valid and reliable multidimensional measures had to be established and validated (Churchill, 1979; Churchill & Iacobucci, 2004; Ping, 2004).

With this in mind, the measures were stringently assessed and validated by the Item Analysis and Factor Analysis procedures suggested by Churchill (1979). Therefore, it is reasonable to claim that the measures employed to test the hypothesised relationships among constructs, as postulated in the conceptual model, have successfully achieved unidimensionality, validity and reliability. Ultimately, the primary goal of the research of generating a plausible model that could be characterised as having statistical and explanatory power (Cavana et al., 2001; Hair et al., 2010), which permits the confident interpretation of results, was accomplished after minor modification made to the proposed model.

This research was developed based on a broader conceptualisation of the consumer adoption process, which comprises the sequence of stages that individuals go through in the process of accepting a new product. The stages vary greatly in usage, but tend to include (i) attitude formation, (ii) developing favourable attitude towards social media through affective and cognitive responses, and (iii) technology innovation characteristics. This conceptualisation is consistent with Rosenberg and Hovland (1960), Fishbein and Ajzen (1975), Katz et al. (1973) and Rogers (2003) who suggest that although the stages of adoption are important, they are complicated, and, hence, should be further studied (Tornatzky & Klein, 1982; Rogers, 2003; Sun et al., 2008).

The research design of this study has been conducted in five main phases, as follows:

i. First, theories were reviewed based on the three major disciplines pertaining to consumer behaviour, technology and media. The theory concerning consumer behaviour was reviewed in order to obtain an overall understanding of human attitude formation towards stimuli (i.e. social media). The theories that were evaluated were: (i) TRA

(Fishbein & Ajzen, 1975), (ii) TPB (Ajzen, 1985), (iii) TAM (Davis, 1989) (iv) UTAUT (Venkatesh et al., 2003), (v) BRT (Westaby, 2005), (vi) TCAM (Rosenberg & Hovland, 1960), (vii) Maslow's Hierarchy of Needs (Maslow, 1970), (viii) Motivation Process Model (Durgee et al., 1996), and (ix) MGB (Perugini & Bagozzi, 2001). The theory concerning technology was reviewed to understand how consumers adopt the technology innovation based on its special properties, structure and content; the theory that was evaluated was DIT (Rogers, 1994). Finally, the theory pertaining to media was investigated to examine the underlying needs that push consumers to adopt media. Therefore, the theory that was evaluated was UGT (Katz et al., 1973). These theories were chosen as the basis for developing the conceptual model of this research due to their consistent capability to explain a substantial proportion of the variance between constructs, as derived mainly from previous studies on the adoption of technology-based mediums. In particular, the proposed model seeks to take advantage of the validity and reliability of media needs and innovation characteristics in order to improve the model's explanatory and predictive power (Gauvin & Sinha, 1993; Karahanna et al., 1999; Citrin et al., 2000; Kamarulzaman, 2011).

ii. Second, an extensive literature review that deals with the social media, especially on innovation characteristics was performed. Technological innovation was investigated in the study pertaining to social media invention, where it sees social media as a revolution from the Internet and as a potential source of overall understanding of social media adoption in Malaysia. Social media innovation characteristics were found to be linked to an increase in social media adoption. Hence, the social media needs were also examined, which contributes to specifying a new set of social media needs, as proposed by UGT. Accordingly, this research developed a conceptual framework that integrates social media needs with social media innovation characteristics, which are

recognised in the field of media and innovation studies for generating factors that lead to adoption. Particular attention was paid to identifying the antecedents of social media adoption. The relationship among these constructs contributes to a better understanding of the needs and motivations concerning social media, which tested the mediating role of innovation characteristics.

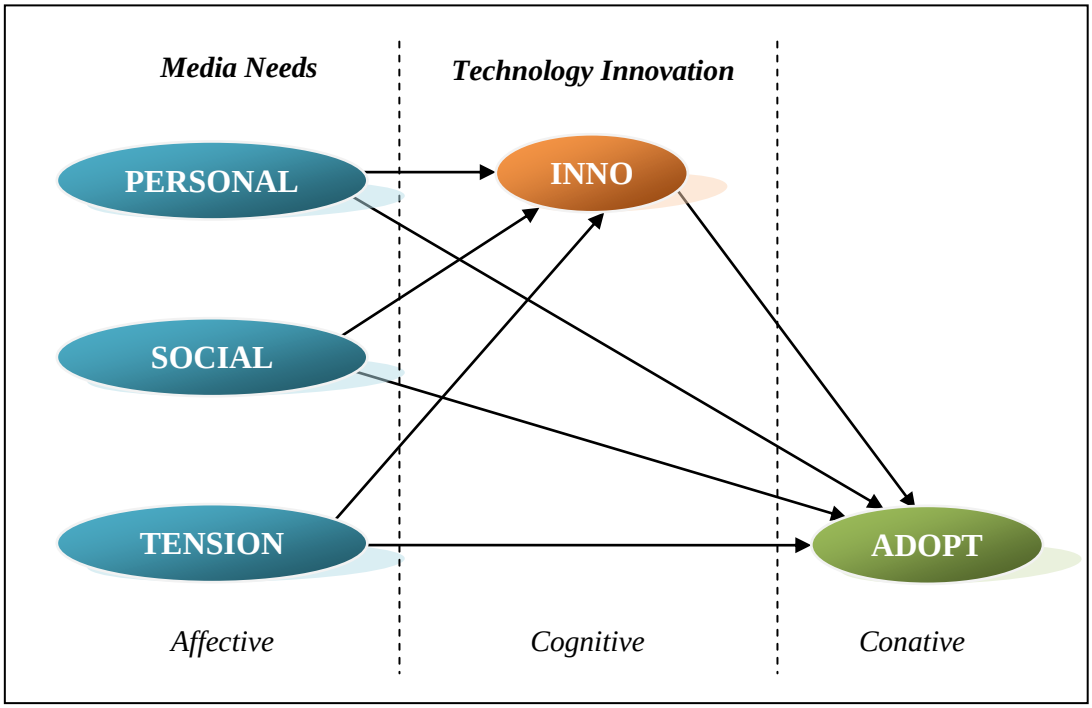
iii. Third, focus group discussions were conducted to obtain the primary data, which was necessary to explore the social media adoption driver and to investigate whether the set of needs and motivations developed concerning social media are correct. A semi-structured question was designed based on previous research for 48 participants. Then, qualitative data were analysed using content analysis to identify the correct themes from the FGD.

iv. Fourth, a questionnaire was developed to collect the primary data necessary to test the proposed model. Face and content validity were tested and the necessary suggestions were taken into consideration. The questionnaires were then pre-tested and posted using an online survey. A total of 428 usable responses were used during this phase.

v. Finally, a three-stage process was employed for the statistical analysis of collected data. The first stage employed factor analysis and Cronbach's alpha determination for preliminary assessment of reliability and validity of the study measures. Factor analysis was applied to test the dimensionality of the data with the aim of producing a set of items that reflect a single underlying factor or construct. The remaining measures were then subject to a reliability analysis to examine the reliability and validity of the measures used in this study. The second stage employed PLS to first

validate the measurement model, and, in turn, achieve construct validity and a more rigorous estimation of reliability and testing of the unidimensionality of the scales. Then, the proposed model was subjected to structural model analysis also using the PLS technique to test the structural model using two steps, that is, the structural model without mediator and structural model with mediator variable.

Figure 7.1: The Research Model



Key: PERSONAL – *Personal Needs;* SOCIAL – *Social Needs;* TENSION – *Tension Release Needs;* INNO – *Innovation Characteristics;* ADOPT – *Social Media Adoption*

This study took the lead to advance research into consumers' adoption of social media by taking the media needs and technology innovation approach. Based on the fundamental research question, 'what drives consumers to adopt social media?' this research set out to build an understanding of the primary drivers of social media adoption. Based on the research model presented in Figure 7.1, the research model was

designed to identify the inter-relationships between the antecedents of social media adoption.

7.6 Research Contributions

There are some important contributions for academic, methodology and practice as an outcome of this research. Accordingly, this section is arranged in three subsections that address the contributions to theory, methodology and practice.

7.6.1 Theoretical Contributions

As the social media continues to broaden its coverage worldwide, the boundaries between consumer-to-consumer (C2C), consumer-to-marketer (C2B), and marketer-to-consumer (B2C) have become more transparent because more activities and relationships have taken place through social media. Whether the focus of interest is on C2C, C2B or B2C, understanding how consumers behave in social media is a good starting point for a better marketing strategy. This research has conceptualised a social media model that demonstrates social media needs and social media characteristics that influence social media adoption. Thus, this study makes several contributions to the body of knowledge in several areas as below.

7.6.1.1 Contributions to the Media Adoption Model

First, the comprehensive, yet parsimonious model developed in the present study makes an important contribution to the emerging literature on social media behaviour, by

grounding variables and applying them to a new context of social media study. Based on the three dominant theories and one model that have been used, i.e. TRA, DIT, UGT and TCAM, this study integrates a few characteristics that have been drawn from previous studies. As a result, the proposed model of social media adoption highlights the influence of consumer media needs and social media innovation characteristics.

The second contribution of the research model is that it examines the actual objectives of the social media behaviour without signalling its relationship with the intentional behaviour; whereas the past research on TRA has either indicated acceptance by inference from the respondents' intentions, in the sense that intention is positively related to behaviour, or measured 'subjective' self-reported actual behaviour. This is an important issue, as researchers have questioned the strength of the relationship between intention and self-reported subjective use (Sheppard et al., 1988). In measuring the actual adoption of social media, the present research contributes to previous literature by supporting the proposition that intention to use the Internet medium represents the actual adoption behaviour.

Finally, there are several findings on the antecedents of social media adoption, which contribute to theory. Firstly, the positive relationship between PERSONAL and SOCIAL with ADOPT, suggesting the consumer develops a strong affective connection with the medium, whereas TENSION with ADOPT shows an indirect relationship suggesting the importance of the INNO as a medium that connects the consumer needs concerning social media and adoption behaviour. Secondly, the positive relationship between INNO and ADOPT suggests that the simplicity of social media technology depends on consumer involvement based on inherent needs, values and interests. Thirdly, INNO acts as an indirect antecedent to adoption through PERSONAL and

TENSION, rejecting the relationship of SOCIAL, thereby highlighting the significant effect of social connection in social media adoption decisions. This strengthens the attribute of social media itself, which is used as a social platform to bridge the social relationship between social media users.

Having to understand the nature of social media that exists on the technology platform, it is difficult to ignore the close relationship between the media and technology attributes. The merging of these two entities is seen to be a significant contribution to the knowledge. The model established a new understanding of consumer uses and gratifications towards social media. It furnished detailed knowledge on the antecedents of media needs that were derived from three basic psychographic needs – personal, social and tension release.

7.6.1.2 Contributions to the Uses and Gratifications Theory

The results suggest that the proposed social media adoption model based on the Uses and Gratifications Theory assists in developing the categories of needs and their drivers, which possesses substantial explanatory power. As the prior literature has offered numerous variables to predict media needs, the present research has identified the most important ones, which confirm that they share some similarities in needs with other mediums of communication. The needs confirmed derived from this research are (i) Enjoyment, (ii) Entertainment, (iii) Social Influence, (iv) Social Interaction, (v) Companionship, (vi) Belongingness, (vii) Playfulness, and (viii) Escapism.

7.6.1.3 Contributions for the Diffusion of Innovation Theory

The results also show evidence of the effects of innovation characteristics on social media adoption. The innovation characteristics derived from the Diffusion of Innovation Theory by Rogers (2003) found that three characteristics play a direct and indirect effect in bridging the felt needs with social media adoption: (i) Relative Advantage, (ii) Compatibility, and (iii) Observability. This implies the importance of innovation characteristics in enhancing the adoption behaviour of consumers. As the consumers gain experience with the technology innovation, more cognitive considerations emerge and gain significance in determining the adoption behaviour. Hence, the relational element of innovation characteristic plays an important role in social media adoption.

7.6.1.4 Contributions to the Typology of Social Media Consumer

Another important contribution of this research is the identification of three categories of needs of social media that allow optimising the probability of efficiently addressing social media customers in a social media typology. Based on these three categories, it provides the potential for a much closer fit between the marketer and heterogeneous social media customer.

Previously, in the area of market segmentation, marketers have traditionally dealt with heterogeneity by segmenting the market based on basic market segmentation – demographic, geographic, psychographic, behavioural and benefit (Barnes, Bauer, Neumann, & Huber, 2007; Peter & Olson, 2010; Strokes, 2009). However, having to understand that social media is unique in its own way, traditional segmentation could mislead marketers in reaching the right social media target market. The nature of social

media has dissolved geographical boundaries, bringing businesses and consumers together in a low friction environment, hence traditional market segmentation is likely to be unsuitable.

Therefore, consumer typology of social media based on personal, social and tension release can be proved to be an effective instrument for identifying and addressing different social media consumer clusters. Consumer typology of social media can be used for shaping a social media marketing strategy. Hence, these findings contribute to tailor marketing activities to the needs and expectations of customers that basically have different needs. Only through an understanding of the different customer typology of social media will it be possible to develop strategies and tactics to attract and maintain customer relations.

7.6.1.5 Contributions to the Means-end Chain of Social Media

The means-end chain of social media form an associative network (through social media attributes) on the consequences of using social media and values that consumers gain out of their usage. The social media means-end chain is important because it explains consumer involvement with the medium. Based on the means-end perspective, it is suggested that consumers perceive social media attributes subjectively in terms of personal consequences; hence, consumers see the adoption of social media as a means to an end, which is their gratification received from the adoption/usage.

Based on the research model, the social media means-end chain was established by identifying the social media attributes that are most important to consumers and associated it with usage consequences and values. It identifies the media needs sequence

at different levels of social media adoption and predicts consumer involvement with the medium.

Therefore, the means-end chain of social media contributes to the knowledge by giving deeper comprehension of consumers' motivation to use social media that is derived from two important constructs: (i) media needs and (ii) social media technology. It also determines the influence of values for consumer segments and relates these values to distinction at the consequence and grouping levels.

7.6.1.6 Contributions for Research Measures

This particular contribution is based on the development of an overall instrument to measure the adoption of social media. The development process began with the input obtained from the focus group discussions in the explanatory stage (see Chapter Five). From the explanatory results, validated instruments were sought, and then appropriate items were chosen and tailored to suit the consumer and social media setting. Subsequently, the items were revised as necessary, and then tested and validated through pilot testing by experts and actual consumers. The results show that not all items indicate a high degree of confidence in their context and construct validity; limitations due to the nature of online surveys and Malaysian sample should be taken into consideration when discussing this effect.

The research instrument consisted of the original TRA, UGT and DIT constructs. It should be noted that the scales used in the current study were context specific, which prevented change in the context setting, which can cause the meanings of items to vary according to the study context. Therefore, this indicates that if any replication study was

to be carried out beyond the social media context, some refinement to the indicators used for the constructs must be carefully considered.

7.6.1.7 Contributions to the Social Media Adoption Literature

Based on the literature review pertaining to consumer behaviour towards social media adoption, this study has extensively explored the Internet and social media industry, particularly on the emergence of social media and its innovation. The effort of understanding the nature and structure, facts and statistics with regard to the social media phenomena should be valued. Although the social media phenomenon is reported to have significant economic and social impacts globally and locally, being the most highly involved and engaged social site online, the motivation of consumers to become a member of social media sites remains unknown. This research responds to the calls for advanced research on social media adoption made by various scholars in the marketing and media disciplines (Haridakis & Hanson, 2009; Kaplan & Haenlein, 2010; Parra-López et al. 2011).

In summary, both the theoretical and empirical findings of the research and the overall model results have contributed to the understanding of the interplay between individual motivation, which involves media needs and innovation characteristics in social media adoption. The conceptual ideas and supporting empirical evidence revealed in these two streams of research serve as guiding parameters for social media adoption constructs, which have been integrated and rationalised to formulate a comprehensive and justifiable model. Through this study, both media needs and innovation characteristics have been found to have either direct or indirect effects on social media adoption. Thus, the findings indicate that the influencing factors on

innovation-based media (i.e. social media) are more complex compared to other media. Thus, this approach would be of practical use to practitioners in understanding consumer behaviour related to social media.

7.6.2 Contribution to Methodology

Selecting research methods for a rigorous study is challenging because methodology considerations cannot be based solely only on the suitability of the method but must also consider separation of the context in which the research ideas are found. The methodological contributions that can be noted from this research outlined below.

7.6.2.1 Contribution to the Multi Methods Triangulation Approach

This research endeavours to make a methodological contribution by adopting a multi method triangulation approach. The qualitative exploration of focus group discussion amongst actual social media users provides feedback and a rich description of social media users' expectations and experiences. The input enables a specific picture to be built, illustrating which factors actually influence consumers to adopt social media. However, the value of these explorations is limited, since the behaviour of the individual concerning social media varies across the different types of usage motive, for which consideration on the demographics and individual backgrounds are noted. Further, as this research aimed to understand the antecedents and their relationship with social media usage, the data needed to be quantified, which was the rationale for using both qualitative and quantitative methods that eventually evidenced the applicability of the approach in the social media study context.

7.6.2.2 Contribution to the Measurement Model

The methodological contribution is the development of robust measures for this research, which enabled empirical testing of the hypothesised structural model that was developed based on theories, previous research findings and exploratory FGD interviews. Given the lack of advanced research into the consumer and social media adoption context, the measures of the core construct (i.e. media needs, innovation characteristics and social media adoption) had to be defined and modified accordingly. In order to purify all measures, this research adhered to the guidelines suggested by Churchill (1979), and, in turn, the resulting measures were refined and validated accordingly using the PLS-SEM analytical technique. The measure validation process is illustrated explicitly in Chapters Five and Six. It is worthwhile noting that in assessing the measures' validity and reliability, all established methods were used, as suggested in the PLS-SEM related literature. Hence, it could be argued that the current research is among the very few to have done this.

7.6.2.3 Contribution to the Mediation Effect

This research verified the mediating role of innovation characteristics in the relationship between consumer media needs and social media adoption (full mediation effect), and the relationship between media needs and social media (partial mediation effect). This knowledge lends an important hand in the study and advancement of theories relating to relationships between these two predictors and the outcome. In addition, it helps in understanding that the mediating effect of innovation characteristics is equally important in contributing to social media adoption.

7.6.3 Practical Contributions

There are clear practical implications flowing from this research. This should ultimately translate into managerial lessons. When dealing with consumers in social media, the issues that concern marketers are similar to those from other contexts of consumer research. The difference is that the conversational and content of social media appear important to complement the consumer motivation towards social media, hence giving an advantage to the marketers to fully utilise this property. Social media is noted to be a very active and fast-moving domain. Therefore, it is crucial for companies to consider social media influence over consumer behaviour. Given that social media has a social and media component, the contributions are suggested below.

7.6.3.1 Understanding Social Media Market

This research contributes to and extends the understanding of the Internet as a medium for commercial use in the C2C, B2C and B2B arena, identifying the rationale of consumers for social media adoption. As noted by Boyd and Ellison (2007), an understanding of the reasons for social media usage is particularly relevant in the context of predictions made regarding the extent of social media usage in the future. From a managerial viewpoint, firstly, the findings provide support for investment decisions, and for decisions relating to their participation in social media that address and take the concerns of consumer motivation into consideration. Although the findings rest upon a rather extensive empirical investigation, as regards the external validity of findings, it must be pointed out that the results are only valid for Malaysian consumers.

Thus, this research contributes to an understanding of how social media can be embraced by marketers, and, particularly, how it contributes to the development of social media marketing in Malaysia. To this end, the framework proposed for analysing the Malaysian consumer behaviour towards social media in order to gain an understanding of the antecedents of social media adoption could be used as a practical tool to predict how social media consumers behave.

7.6.3.2 Predicting Social Media Behaviour

This contribution is related to overall social media behaviour. As consumer involvement and engagement with social media are found to influence adoption. One of the prominent reasons why consumers adopt social media is because it is convenient, personalised and for social connection.

Thus, by understanding this research model, marketers can create a media strategy that maximizes the accidental exposure of their brand on social media, and, at the same time, facilitate intentional exposure of their brand in social media by making sure appropriate marketing information and prompt feedback are available in their social media page, as, when and where the consumer wants it.

In addition, in designing a social media marketing strategy, the research model serves as a basic understanding of consumer involvement with the medium. Due to the rapid adoption of social media, it demands that marketers be numbered among the social media participants and engage in the social media conversation. Searching for a better consumer understanding from this research, marketers can diagnose social media situational influence through which social media market can be carefully segmented and

targeted. Upon this understanding, the marketing mix can be placed accordingly, based on consumer affective and cognitive responses, as categorised in the research model.

7.6.3.3 Medium of Contact, Conversations and Socialising

Based on the underlying motives that have been outlined from the findings, social media is also regarded by the consumer as a medium for contact and conversation. Marketers need to choose the right social media for communication and interaction purposes depending on the target market that they intend to reach and the message that they intend to communicate. Accordingly, it is crucial to ensure that all marketing activities should be aligned and consistent with all the social media sites that marketers use. One important element of social media communication is the resolution of ambiguity and reduction of uncertainty where confusing and contradicting messages across different channels can create conflict between the consumer of social media and the marketer. Further, marketers should listen carefully to consumers and explore the consumer social media presence so that conversations and socialising can be managed carefully in this medium.

7.6.3.4 Social Customer Relationship Management (CRM)

The adoption of new technology and the Internet have enabled CRM practices to flourish. The communications directed towards potential customers can be customised at an individual level via social media, for instance, Facebook pages, YouTube, Twitter and blogs.

One of the strengths of social media is that it helps marketers to build a close connection with the consumer, through which the consumer is able to interact with the brand (i.e. on the brand page) as frequently as they like. Therefore, the consumer media needs, which leads consumers to use social media, can serve as a basic understanding concerning how marketers can start connecting with customers based on satisfying these needs. This is important because, if the marketing approach used to connect with customer is done properly, marketers can continuously keep their brand image uppermost in the mind of the consumer and strengthen brand equity in the long run.

At the same time, the interaction between the customer and the marketer can be stored in a CRM database system for the benefit of future planning. The interactive environment that social media brings increases the collaboration between the marketer and consumer. With continuing technological advances, marketers have the ability to track and store customer information optimally from the conversation they have with the consumer via social media, hence, customising the offerings to suit customer needs and desires.

Therefore, this research model helps marketers to understand consumers and deal with them individually. The idea of creating a relationship with customers based on quality, dialogue, innovation and learning is regarded as a more sustainable strategy and could be seen as largely inimitable by competitors. In essence, a social CRM strategy could create a long-term competitive advantage.

7.7 Research Limitations and Suggestions For Future Research

Previous research has studied various types of media pertaining to identifying needs concerning why people use and adopt the media. This research reviewed the literature

and organised a set of needs for social media. These needs are stimulated by the affective and cognitive responses consumers build towards social media. This research has its own value by producing snapshot views of social media. In the course of conducting this research, several limitations were observed. The limitations stem from various aspects including within the research process itself and outside the process. However, necessary remedial actions have been taken to minimize the possible effect of these limitations on the results. In addition, the limitations mentioned suggest fruitful directions for future research to extend the research findings. In the following paragraphs, these limitations are discussed and future directions are explored based on the knowledge gained from conducting the research.

The first limitation concerns the context of the research in that this research is specifically conducted in the Malaysian context, which puts constraints on the generalisability of the results to other countries. The general applicability of the findings for the global consumer is limited. More sophisticated data collection is needed for future research. As this study was conducted in Malaysia, social media usage and patterns were influenced by local culture, status and lifestyle, the generalisability of the findings to other countries are limited. This calls for future research to address cultural differences by further examining the cross-cultural issues. In addition, future research should test the research framework in other country settings that share similar social media penetration but have different national cultures, as this would extend the external validity of the research.

The second limitation concerns the research model. Although the research model and results were developed and interpreted mostly in one direction (from antecedents to the behavioural response), cross-sectional data collection and analysis does not rule out

opposite direction interpretation. All the constructs incorporated in the hypothesised model were assessed at a single point in time; hence, no definite conclusions can be drawn concerning the causality of relationships among constructs. In addition, the structural model shows one path has a significant and insignificant relationship. Therefore, in order to make this social media model more effective in the future it is suggested that other possible paths that this research did not examine should be tested. This research did not examine the directionality of influence and is thus limited in its ability to draw general conclusions about the exact influences of the constructs. Therefore, future research via a longitudinal study would provide further significant contributions to knowledge.

Thirdly, the measures of all the research constructs were collected at the same point in time and via the same instrument, so the potential for common method variance may exist (Karahanna et al., 1999). However, there was no indication of a lack of discriminant validity among the principal constructs, the usual sign of common method variance. Thus, future research could employ a more controlled experimental manipulation to prevent respondents from providing uniform responses across all constructs.

Fourthly, although this study attempted to include a wide range of variables to explain consumers' adoption behaviour of social media, it seems clear that other factors associated with complex characteristics must be explored and potentially included in a more complete theoretical model. More broadly, future research should seek to further expand and extend this model to encompass other theoretical constructs. It would be interesting to explore cultural influences on social media adoption, political and social media as well as relationship building via social media.

The fifth limitation concerns the social media context focusing more on social networking sites. The research model may not be too relevant for other types of social media because the majority of the data were derived from the social networking site. Therefore, further development and in-depth analysis of scale items are recommended to fully capture the attributes and dimensions for other types of social media. Also, this research framework can be further expanded in other media technology contexts, for instance, android-based devices, smartphones, Apple technology devices, blackberry technology, tablet technology or even for IPTV and mobile applications.

Lastly, from a theoretical perspective, this research framework has established a wider set of social media needs that covers all types of social media in general. Therefore, it is suggested that this set of needs be examined in greater detail to confirm that social media only has this set of needs prior to adoption. This is because social media is advancing day-by-day. The new setting of social media is introduced; therefore, it is indeed important to test these constructs again and again. In addition, future research can add the role of personality in social media as a mediating or moderating effect. The adoption of social media and the pervasiveness of existing technologies can be affected by individual differences (i.e. personality). The personality construct may further explain social media adoption because it is an antecedent of attitude, such as satisfaction.

7.8 Reflection of the PhD Journey

As I reflect over the years invested in doing my PhD research, I could simply say that every aspect of the study has taken me into different but challenging experiences. While parts of those experiences had been easygoing and exciting, others I have gone through

with much difficulties and frustrations. The first challenge started with the task of coming up with research proposal which included finding a researchable topic, identifying the problems and developing an appropriate research methodology. Over the years this foundation stage which has provided the blue print for the rest of my journey remained for me the most frightening but fascinating aspect. This is especially so because it forced me to rethink through the work and to follow the rules for rigorous, formal presentation of the arguments in such a way that brought major changes in the way I had initially planned to approach the study.

In retrospect, the shaping of my PhD research was a slow (and sometimes frustrating) process, but I was always encouraged by the people around me, particularly by my Supervisor and fellow postgraduates. Indeed, I found that it was important to have time to think alone and work alone, but also to have time to share thoughts and develop ideas with others. It is not uncommon to feel that the PhD research is an insurmountable task that will never end. From my experience the key to completing such an outstanding PhD research is perseverance, hard work, good time management and prayer.

In addition I realised the importance of keeping the research questions in focus when writing the thesis. This has helped me to avoid getting sidetracked. I did my writing with the help of my Supervisor by starting with a brief literature review to set the work in context, identify the gap, and thus show how the study attempts to fill a void in the area of social media adoption literature. I cannot deny that during the writing process, I often encountered the difficulty of depending too much on other authorities rather than my own primary literature or ideas especially when taking into consideration the comments and feedbacks I got from the PhD Colloquium. The advice was that I should be careful to organise my materials in such a way that will allow much of my original

data to stand relatively free, and to use secondary sources to support my arguments. Although putting this to practice was not always easy, I became conscious that unless this is done, I may end up proving other peoples work rather than my own thesis.

Having said this, it is important to consider the criterion of originality in PhD research. There are various ways in which one can make 'an original contribution to knowledge' - such as by developing new theories, challenging or re-interpreting existing theories, or applying existing theories to new areas of knowledge. Generally my PhD research tends towards the second approach, but invariably I found that during the writing process, some new thought also emerged. Looking back at my initial proposal, I am aware of the extent of improvement in my ability to do serious academic research. During the process of writing I have had to revise my thesis outline, and on occasions adjusted my statements of problem and research questions. This, no doubt came as a result of interaction with other works, analysing data, and preparing several drafts of my thesis chapters.

I can say that my PhD journey is like “climbing a mountain”. It certainly was challenging, and at times overwhelming, but like all great challenges I believe this mountain climbing was more mental/emotional than anything else. This has been an amazing six years of my life. I experienced a huge shift in my sense of identity. My worldview also changed radically. As I came to understand human development and systems, I let go of my success-oriented approach to life. I now see everything in life as connected, with multiple ways to understand and make changes to systems. As a result, I have a renewed interest and appreciation.

7.9 Conclusion

The rapid growth of social media adoption and usage is having a profound impact on modern society. Social media tools and user generated content has changed how consumers experience social media. To better evaluate and anticipate the profound impact of social media on consumers, it is important to further refine the understanding of consumers and social media adoption.

The work presented in this thesis focuses on two key aspects: (i) analysing the driver of social media adoption and (ii) analysing the innovation characteristics of social media. In summary, this research presents a refined conceptualisation of the social media adoption model and developed a more complete theoretical model that takes into account two basic constructs of the social media adoption itself: (i) the motives of usage and (ii) technology innovation of the medium.

An effective understanding and modelling of interactions and communication behaviour in social media is enabled through the combined analysis of the special properties structure and content of social media. Consumer active participation is what makes social media exciting and identifying its structure and properties is a significant challenge. This research highlights the importance of three important types of need that consumers relate as being important – personal, social and tension release. Thus, this research extends these categories into more detail by determining that entertainment and enjoyment play a significant role in getting consumers to adopt social media. In addition, consumers are highly influenced socially by their peers. At the same time, the interaction that exists between peers and other social media users gets the consumer hooked and contributes to their continued use of social media. Despite these two types

of category of needs, tension release needs bring out the affective responses that also play an important role in giving consumers a sense of belongingness, playfulness, companionship and escapism. This research also explicitly considers innovation characteristics that consist of relative advantage, compatibility and observability as key drivers that push cognitive responses apart from affective responses that push personal, social and tension release needs.

This research spans a period of three years and is a snapshot of the changing landscape of social media. This research sees the emergence of social media and its mainstream adoption as a key factor that has brought about a substantial change in how consumers interact with each other. Through this study, it has been determined that Facebook (social networking site) is one of the important types of social media. Facebook has been the 'talk of the town' and its adoption has been both substantial and rapid, which is due to the ease of publishing and the ability to freely express thoughts, opinions and comments, which is unprecedented.

In addition, this context of research gives insight into the collective minds of the Malaysian demographic, geographic region, profession and even generation analysis on the social media consumption.

In the current research, it was determined that social media replaces human society and reflects consumer offline associations in online interactions. The social web infrastructure is built on facilitating interactions between consumers that are willing to share similar interests. Hence, social media emerges through shared actions (like use of similar tags, rating videos or subscribing to feeds), by explicit linking (via blogs, adding friends to the social graphs and through trackbacks from comments) and by implicit

behaviour (like expressing interest in a topic, clicking through results from a search engine or clicking online ads). A holistic approach to social media detection needs consider multiple dimensions of online presence. This research takes an initial step in this direction.

This research also suggests that theories proposed by different leading researchers can be integrated into one framework, so that the understanding and prediction of consumer and social media adoption is far more comprehensively grounded than by using only one theory. To conclude, this research's theoretical framework provides an integration of existing research and a springboard for future systematic research in the area of new media studies and consumer behaviour.

Simple can be harder than complex.
You have to work hard to get your thinking clean to make it simple. But it is worth it in the end, because once you get there, you can move mountains.
S t e v e J o b s

(Alhamdulillah)

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APPENDIX A : Research Questionnaire

GRADUATE SCHOOL OF BUSINESS
FACULTY OF BUSINESS AND ACCOUNTANCY

A STUDY ON CONSUMER AND SOCIAL MEDIA

Do you use social media?

Social media is an online technology that enables you to communicate, participate and share information and resources, i.e. text, audio, video, images and podcasts, easily via the Internet. Examples of social media are Facebook, MySpace, LinkedIn, Twitter and Foursquare

☐ **YES, please Proceed**
☐ **NO, I thank you for your time**

Researcher
Izzal Asnira Zolkepli
PhD Candidate
Contact No: 012-4403110
Email: izzalasnira@siswa.um.edu.my/izzalasnira@gmail.com

PhD Supervisor
Dr Yusniza Kamarulzaman
Department of Marketing
Contact No: 03-7967 3915
Email: yusniza@um.edu.my

SEPTEMBER 2011

Dear Respondent,

As part of the requirements for a PhD Degree in University of Malaya, I am hereby conducting an academic research to study your behaviour towards social media adoption. I would very much like to know your views on the subject matter and I hope you can spend about 10 minutes of your time to complete this questionnaire.

Please rest assured that this is an academic study, therefore, no sponsor is involved. The researcher will neither release nor disclose any information to any person, organisation or company.

Please know that this is an anonymous questionnaire, therefore, your name is not needed. To help maintain your anonymity in this academic study, please do not include your name anywhere in the questionnaire. Each questionnaire will be treated as strictly private and confidential. Only the researcher has access to the questionnaire. In addition, the report of this study will only show statistical summaries of the findings and only group data will be presented and published.

This questionnaire has six pages. Participation in this academic study is voluntary in nature. Completion of the questionnaire indicates your consent to participate. This academic study is approved and funded under the Graduate School of Business, Faculty of Business and Accountancy, University Malaya.

Your true and honest answers are very much appreciated. Should you require any further information concerning this academic study, please do not hesitate to contact the researcher.

I thank you for your time and cooperation.

Yours sincerely,

Izzal Asnira Zolkepli
(CHA080007)

INSTRUCTIONS
Please answer all questions, tick (✓) for every answer and do not omit any. Never put more than one check mark unless you are required to do so.

1. When did you first start using social media?
   - □ < 3 months ago
   - □ Between 3 – 6 months ago
   - □ Between 7 – 12 months ago
   - □ Between 1 – 3 years ago
   - □ Between 4 – 6 years ago
   - □ Between 7 – 9 years ago

2. How frequently do you log on to social media?
   - □ I never log off
   - □ Several times each day
   - □ Once a day
   - □ Once a week
   - □ 2 – 3 times a week
   - □ 2 – 3 times a month

3. What is the average length of use each time you log in?
   - □ < 1 hour
   - □ Between 1 – 2 hours
   - □ Between 2 – 3 hours
   - □ Between 3 – 4 hours
   - □ Between 4 – 5 hours
   - □ > 5 hours

4. Which of the following devices do you usually use to log in? (You may ✓ more than one)
   - □ PC Desktop
   - □ PC Laptop
   - □ Mobile phone
   - □ Smartphone/PDS
   - □ Ipad/Tablet Phone
   - □ Portable MP3 Player
   - □ e-book reader
   - □ Interactive TV

5. Which of the following social media have you used? (You may ✓ more than one)
   - □ Bebo
   - □ deviantART
   - □ Facebook
   - □ Flixster
   - □ Foursquare
   - □ Friendster
   - □ Hi5
   - □ Linkedin
   - □ LiveJournal
   - □ MySpace
   - □ Orkut
   - □ Photobucket
   - □ Picasa
   - □ Scribd
   - □ Shelfari
   - □ SlideShare
   - □ Tagged
   - □ Twitter
   - □ Flickr
   - □ WordPress
   - □ Xanga
   - □ YouTube
   - □ Others

6. Based on Q5, how would you rate your social media usage? (Please circle)

   1 2 3 4 5

   Less Used — Heavily Used

7. What is your regular social media activity? (You may ✓ more than one)
   - □ Update status
   - □ Upload pictures/videos
   - □ Post entry/blog entry
   - □ Interact with friends
   - □ Create group
   - □ Create event/gathering
   - □ Chat
   - □ Sell/buy products
   - □ Play games

- □ Search for friends
- □ Check out friends
- □ Join group/brand page
- □ Participate in application
- □ Others

8. Based on Q7, how do you rate your activity? (Please circle)

Active 2 3 4 Very Active

	WHAT IS YOUR DEGREE OF AGREEMENT?	Strongly Disagree	Disagree	Neither Agree nor Agree	Agree	Strongly Agree
	Your perception of social media & technology					
9.	I bother about latest technology					
10.	I learn to operate new technology quickly					
11.	Latest technology is useful					
12.	New technology is fashionable					
13.	I am usually among the first one to use new technology					
14.	I like to be seen using social media					
15.	I bother about latest technology					
	Your perception of social media as an interactive platform?					
16.	It gives a great deal of control					
17.	It facilitates two-way communication					
18.	It enables conversation					
19.	It gives instantaneous information					
20.	It is easy to navigate					
21.	It is effective in gathering feedback					
22.	It processes feedback quickly					
23.	Social media is an interactive site					
	Your perception of social media as a socializing platform					
24.	I express myself freely					
25.	I fit in a group of people that share the same interests					
26.	I get more points of views					
27.	I meet new people					
28.	I participate in the discussions					
29.	I view what other people talks about					
30.	Social media is a place to socialize					
	Your perception of people's influence on your usage					
31.	They recommend me to sign up					
32.	They think having me around would let me stay in contact with them					
33.	They think I should get connected through social media					
34.	They think I should have an account in social media					
35.	They think it would be great if my name can be found in their friend list					
36.	I got to know about social media from people around me					
37.	Overall, people around me have influenced me to use social media					

	Your perception of social media as a place for friendship					
38.	Enables me to build my own social network					
39.	Enables me to expand my social network					
40.	Enables me to reconnect with old friends					
41.	Enables me to find friends					
42.	Enables me to get through to friend that is hard to reach					
43.	Enables me to connect with friends that live far away					
44.	Enables me to meet others like me					
45.	Enables me to feel less lonely					
46.	Social media to me is a place for friendship					
	Your perception of social media as a place you belong					
47.	I feel attached to my friends					
48.	I feel close to my friends					
49.	I keep my friends close to me					
50.	I feel a sense of togetherness with my friends					
51.	I feel a sense of brotherhood/sisterhood with my friends					
52.	I feel a sense of connectedness with society					
53.	I feel a sense of connectedness with the world					
54.	I feel connected with the world around me					
55.	Social media is a place I feel I belong					
	Your perception of social media as a platform for playfulness					
56.	Social media amuses me					
57.	Using social media arouses my imagination					
58.	Using social media is enjoyable					
59.	Using social media is fun					
60.	Using social media leads me to online exploration					
61.	Using social media makes me happy					
62.	Using social media stimulates my curiosity					
63.	Social media is a place to be playful					
	Your perception of social media as a place for escapism					
64.	It enables me to get away from family					
65.	It enables me to get away from my problems					
66.	It enables me to gossip with friends without meeting them					
67.	It enables me to hang out with friends without meeting them					
68.	It makes me forget about other commitments					
69.	It passes my time away, particularly when I am bored					
70.	It relaxes me					
71.	Social media is a place for escapism					
	Your perception of social media technology					
72.	It expands my circle of friends					
73.	It expands my social network					
74.	It gives my life greater control					
75.	It improves my life productivity					
76.	It improves the quality of my day					
77.	It fits into my lifestyle					
78.	It fits with all aspects of my life					
79.	It fits with other social media					

80.	It fits with other technologies					
81.	It fits with the way I like to live					
82.	It gives the opportunity to try various applications in social media					
83.	It gives a trial period over its various uses					
84.	It gives a trial period to sign up					
85.	It has a trial basis					
86.	It is easy to sign up without having to pay for it					
87.	It is recommendable					
88.	The advantages of using social media can be noticed by others					
89.	The disadvantages of using social media can be noticed b others					
90.	The excitement of using social media can be noticed by others					
91.	The usefulness of the system is highly observable					
92.	It deals with many mechanical operations					
93.	It involves too many steps when navigate					
94.	It is complicated					
95.	It is difficult to understand					
96.	It is difficult to use					
	Your social media usage					
97.	My usage has benefited my life					
98.	My usage has impacted my life					
99.	My usage has substantially changed my life					
100.	My usage is extensive, therefore I continue using it					
101.	My usage is active therefore I am a frequent user of social media					
102.	I expect my social media usage to increase in the future					
103.	Overall, I adopt using social media because of its usefulness					
104.	Overall, I am satisfied with my social media usage					

Your perception of social media as a place for enjoyment and entertainment
(Tick the number that comes closest to your perception)

		1	**2**	**3**	**4**	**5**	
105.	Dull						Entertaining
106.	Unattractive						Attractive
107.	Unexciting						Exciting
108.	Uncool						Cool
109..	Plain						Stylish
110..	Standard						Unique
111.	Inflexible						Flexible
112.	Passive						Active
113.	Inattentive						Attentive
114.	Unfocused						Focused
115.	Leisure						Concentrate
116.	Sad						Happy
117.	Dissatisfied						Satisfied
118.	Discontented						Contented
119.	Meaningless						Meaningful

120.	Unrewarding						Rewarding
121.	Worthless						Worthwhile

Just a little bit about yourself

122. Gender
- □ Male
- □ Female

123.. Age
- □ Below 20 years old
- □ Between 20 – 24 years old
- □ Between 25 – 34 years old
- □ Between 35 – 44 years old
- □ Between 45 – 54 years old
- □ Between 55 – 64 years old
- □ Above 64 years old

124.. Marital Status
- □ Single
- □ Married with children
- □ Married without children
- □ Divorced/Widow

125. Job Status
- □ Top Management/Professional
- □ Manager
- □ Executive/Administrator
- □ Sales Personnel/Supervisor
- □ Teacher/Trainer
- □ Businessman
- □ Clerical/Production
- □ Technician
- □ Housewife
- □ Student
- □ Others, please specify _____

126. Ethnicity
- □ Malay
- □ Chinese
- □ Indian
- □ Others, please specify _____

127. Highest Education Level
- □ SRP/PMR/LCE
- □ SPM/MCE
- □ STPM/HSC
- □ Certificate/Diploma
- □ Bachelor Degree
- □ Master Degree
- □ PhD

128. Individual Monthly Income
- □ <RM2000
- □ RM2001 – RM4000
- □ RM4001 – RM6000
- □ RM6001 – RM8000
- □ RM8001 – RM10,000
- □ >RM10,000

129. Location
- □ Penang
- □ Kedah
- □ Perlis
- □ Perak
- □ Pahang
- □ Terengganu
- □ Kelantan
- □ Sabah

□ Selangor	□ Sarawak
□ Melaka	□ W.P. Kuala Lumpur
□ Negeri Sembilan	□ W.P. Putrajaya
□ Johor	□ W.P. Labuan

APPENDIX B : Descriptive Statistics

Descriptive Statistics				
	Mean	**SD**	**Skewness**	**Kurtosis**
PERSONAL INTEGRATIVE NEEDS				
PIN1	3.03	1.096	.090	-.767
PIN2	3.96	.650	.039	-.624
PIN3	3.90	.808	-.625	.703
PIN4	3.48	.937	-.567	.028
PIN5	3.51	.878	-.116	-.495
PIN6	4.05	.676	-.062	-.802
PIN7	3.96	.804	-.761	.748
PIN8	3.91	.820	-.622	.602
PIN9	3.98	.709	-.688	.953
PIN10	3.89	.806	-.544	.297
PIN11	3.89	.812	-.632	.692
PIN12	3.90	.756	-.522	.243
PIN13	3.95	.774	-.645	.709
PIN14	3.97	.778	-.456	.206
PIN15	3.83	.945	-.366	-.511
PIN16	3.16	.988	.283	-.513
PIN17	3.05	1.075	.282	-.599
PIN18	3.99	.838	-.381	-.391
PIN19	3.92	.837	-.226	-.549
PIN20	3.02	1.075	.453	-.652
PIN21	2.98	1.100	.435	-.758
PIN22	3.84	.816	-.080	-.658
PIN23	3.09	1.111	.251	-.787
PIN24	3.03	1.095	.310	-.742
PIN25	3.093	1.1081	.261	-.790
PIN26	3.11	1.108	.264	-.828
PIN27	3.06	1.094	.288	-.832
PIN28	3.10	1.064	.309	-.605
PIN29	3.78	.867	-.085	-.544
PIN30	3.17	1.034	.190	-.495
PIN31	3.03	1.010	.222	-.609
SOCIAL INTEGRATIVE NEEDS				
SIN1	3.69	.900	-.801	.395
SIN2	3.95	.745	-.505	.603
SIN3	2.13	.934	.828	.532
SIN4	3.88	.645	-.460	.746
SIN5	3.82	.703	-.423	.772
SIN6	3.45	.968	-.401	-.545
SIN7	3.80	.713	-.615	.566
SIN8	3.92	.826	-.803	.928
SIN9	3.98	.737	-.606	.522
SIN10	3.83	.947	-.709	.108
SIN11	2.50	.981	-.036	-.881
SIN12	3.96	.723	-.497	.769
SIN13	3.71	.881	-.787	.556
SIN14	4.01	.667	-.391	.432

TENSION RELEASE NEEDS				
TRN1	3.94	.755	-.420	-.009
TRN2	2.25	.867	.225	-.627
TRN3	3.95	.745	-.539	.687
TRN4	3.78	.729	-.588	.428
TRN5	3.95	.711	-.479	.614
TRN6	3.90	.777	-.490	.057
TRN7	2.31	.984	.529	-.185
TRN8	3.89	.683	-.305	.174
TRN9	3.58	.808	-.721	.316
TRN10	3.95	.747	-.531	.291
TRN11	2.35	1.105	.518	-.660
TRN12	3.96	.728	-.298	.024
TRN13	3.86	.820	-.700	.746
TRN14	3.93	.789	-.558	.566
TRN15	2.76	1.266	.391	-.888
TRN16	3.07	1.065	-.295	-.743
TRN17	3.91	.798	-.650	.697
TRN18	3.82	.867	-.726	.839
TRN19	3.88	.872	-.844	.843
TRN20	3.77	.778	-.645	.573
TRN21	3.98	.823	-.705	.848
TRN22	3.19	1.136	-.285	-.804
TRN23	3.87	.851	-.726	.898
TRN24	3.66	.827	-.623	.351
TRN25	3.47	.864	-.475	.098
TRN26	3.91	.738	-.525	.733
TRN27	2.17	.843	.584	.156
TRN28	3.96	.773	-.630	.837
TRN29	3.93	.774	-.487	.520
TRN30	3.89	.819	-.535	.449
TRN31	3.42	.983	-.342	-.104
TRN32	3.34	.955	-.215	-.353
TRN33	3.67	.917	-.717	.493
TRN34	3.91	.808	-.614	.549
TECHNOLOGY CHARACTERISTICS				
TECH1	2.75	1.105	-.090	-.835
TECH2	4.01	.649	-.426	.705
TECH3	4.07	.651	-.374	.439
TECH4	2.18	.847	.489	-.016
TECH5	3.53	.811	-.263	.074
TECH6	3.69	.683	-.237	.527
TECH7	3.92	.822	-.695	.862
TECH8	3.94	.847	-.751	.878
TECH9	3.64	.856	-.468	.035
TECH10	4.02	.827	-.759	.787
TECH11	3.27	.718	-.183	.021
TECH12	3.16	.763	-.381	.447
TECH13	3.10	.791	-.429	.274
TECH14	3.46	.893	-.617	.214
TECH15	3.54	.861	-.740	.539

TECH16	2.56	1.047	.202	-.572
TECH17	2.25	.850	.626	.126
TECH18	2.21	.854	.695	.237
TECH19	2.16	.883	.688	.104
TECH20	3.90	.882	-.776	.754
TECH21	3.98	.621	-.339	.704
TECH22	3.90	.645	-.431	.706
TECH23	3.65	.902	-.740	.427
TECH24	3.81	.700	-.549	.545
TECH25	3.83	.648	-.137	-.021
BEHAVIOURAL RESPONSE (ADOPTION)				
ADOPT1	3.80	.905	-.842	.781
ADOPT2	3.79	.816	-.496	.162
ADOPT3	3.90	.649	-.212	.136
ADOPT4	3.79	.722	-.453	.673
ADOPT5	3.65	.853	-.454	.274
ADOPT6	3.76	.775	-.640	.884
ADOPT7	3.97	.781	-.598	.529
ADOPT8	4.03	.614	-.381	.939